# Notices

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Product names mentioned herein are for identification purposes only, and may be trademarks and/or registered trademarks of their respective companies.

## Macrovision Statement

**If your computer has a DVD drive and an analog TV Out port, the following paragraph applies:**

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

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# Important Safety Information

## Safety Instructions

Your system is designed and tested to meet the latest standards for safety of information technology equipment. However, to ensure safe use of this product, it is important that the safety instructions marked on the product and in the documentation are followed.

Always follow these instructions to help guard against personal injury and damage to your system.

### Setting Up your System

- Read and follow all instructions marked on the product and in the documentation before you operate your system. Retain all safety and operating instructions for future use.
- Do not use this product near water or a heat source such as a radiator.
- Set up the system on a stable work surface.
- The product should be operated only with the type of power source indicated on the rating label.
- Ensure that the electrical outlet you are using to power your equipment is easily accessible in case of fire or short circuit.
- If your computer has a voltage selector switch, make sure that the switch is in the proper position for your area.
- Openings in the computer case are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space, at least 6 inches (15 cm), around the system for ventilation when you set up your work area. Never insert objects of any kind into the computer ventilation openings.
- Ensure that the fan vents on the bottom of the casing are clear at all times. Do not place the computer on a soft surface, doing so will block the bottom vents.
- If you use an extension cord with this system, make sure that the total ampere rating on the products plugged into the extension cord does not exceed the extension cord ampere rating.

## Care During Use

- Do not walk on the power cord or allow anything to rest on it.
- Do not spill anything on the system. The best way to avoid spills is to not eat or drink near your system.
- Some products have a replaceable CMOS battery on the system board. There is a danger of explosion if the CMOS battery is replaced incorrectly. Replace the battery with the same or equivalent type recommended by the manufacturer. Dispose of batteries according to the manufacturer's instructions. If the CMOS battery requires replacement insure that a qualified technician performs the task
- When the computer is turned off, a small amount of electrical current still flows through the computer. To avoid electrical shock, always unplug all power cables, remove the battery and modem cables from the wall outlets before cleaning the system.
- Unplug the system from the wall outlet and refer servicing to qualified personnel if:
  - The power cord or plug is damaged.
  - Liquid has been spilled into the system.
  - The system does not operate properly when the operating instructions are followed.
  - The system was dropped or the casing is damaged.
  - The system performance changes.

## Replacement Parts and Accessories

Use only replacement parts and accessories recommended by manufacturer.

To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.

Do not use this product in areas classified as hazardous. Such areas include patient care areas of medical and dental facilities, oxygen rich environments, or industrial areas.

# Battery Disposal

Do not put rechargeable batteries or products powered by non-removable rechargeable batteries in the garbage.

Contact the Samsung Helpline for information on how to dispose of batteries that you cannot use or recharge any longer.

Follow all local regulations when disposing of old batteries.

## Laser Safety

All systems equipped with CD or DVD drives comply with the appropriate safety standards, including IEC 825. The laser devices in these components are classified as "Class 1 Laser Products" under a US Department of Health and Human Services (DHHS) Radiation Performance Standard. Should the unit ever need servicing, contact an authorized service location.

**Laser Safety Note:**
Use of controls or adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure. To prevent exposure to laser beams, do not try to open the enclosure of a CD or DVD drive.

## Power Cord Requirements

The power cord set (wall plug, cable and AC adapter plug) you received with your computer meets the requirements for use in the country where you purchased your equipment.

Power cord sets for use in other countries must meet the requirements of the country where you use the computer. For more information on power cord set requirements, contact your authorized dealer, reseller, or service provider.

### General Requirements

**The requirements listed below are applicable to all countries:**

- The length of the power cord set must be at least 6.00 feet (1.8m) and a maximum of 9.75 feet (3.0m).
- All power cord sets must be approved by an acceptable accredited agency responsible for evaluation in the country where the power cord set will be used.
- The power cord set must have a minimum current capacity of 7 A and a nominal voltage rating of 125 or 250 volts AC, as required by each country's power system.
- The appliance coupler must meet the mechanical configuration of an EN 60 320/IEC 320 Standard Sheet C7 connector, for mating with appliance inlet on the computer.

# Regulatory Compliance Statements

## Wireless Guidance

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz Band, may be present (embedded) in your notebook system. The following section is a general overview of considerations while operating a wireless device.

Additional limitations, cautions, and concerns for specific countries are listed in the specific country sections (or country group sections). The wireless devices in your system are only qualified for use in the countries identified by the Radio Approval Marks on the system rating label. If the country you will be using the wireless device in, is not listed, please contact your local Radio Approval agency for requirements. Wireless devices are closely regulated and use may not be allowed.

The power output of the wireless device or devices that may be embedded in your notebook is well below the RF exposure limits as known at this time. Because the wireless devices (which may be embedded into your notebook) emit less energy than is allowed in radio frequency safety standards and recommendations, manufacturer believes these devices are safe for use. Regardless of the power levels, care should be taken to minimize human contact during normal operation.

As a general guideline, a separation of 20 cm (8 inches) between the wireless device and the body, for use of a wireless device near the body (this does not include extremities) is typical. This device should be used more than 20 cm (8 inches) from the body when wireless devices are on and transmitting.

This transmitter must not be collocated or operate in conjunction with any other antenna or transmitter.

Some circumstances require restrictions on wireless devices. Examples of common restrictions are listed below:

Radio frequency wireless communication can interfere with equipment on commercial aircraft. Current aviation regulations require wireless devices to be turned off while traveling in an airplane. 802.11B (also known as wireless Ethernet or Wifi) and Bluetooth communication devices are examples of devices that provide wireless communication.

In environments where the risk of interference to other devices or services is harmful or perceived as harmful, the option to use a wireless device may be restricted or eliminated. Airports, Hospitals, and Oxygen or flammable gas laden atmospheres are limited examples where use of wireless devices may be restricted or eliminated. When in environments where you are uncertain of the sanction to use wireless devices, ask the applicable authority for authorization prior to use or turning on the wireless device.

Every country has different restrictions on the use of wireless devices. Since your system is equipped with a wireless device, when traveling between countries with your system, check with the local Radio Approval authorities prior to any move or trip for any restrictions on the use of a wireless device in the destination country.

If your system came equipped with an internal embedded wireless device, do not operate the wireless device unless all covers and shields are in place and the system is fully assembled.

Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Please contact manufacturer for service.

Only use drivers approved for the country in which the device will be used. See the manufacturer System Restoration Kit, or contact manufacturer Technical Support for additional information.

802.11b Restrictions:

- European standards dictate maximum radiated transmit power of 100mW EIRP and frequency range 2.400-2.4835GHz;
- In France, the equipment must be restricted to the 2.4465-2.4835GHz frequency range and must be restricted to indoor use.

# United States of America

## Unintentional Emitter per FCC Part 15

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generate uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions may cause harmful interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet helpful: “Something About Interference.” This is available at FCC local regional offices. Our company is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by our company. The correction will be the responsibility of the user. Use only shielded data cables with this system.

## Intentional emitter per FCC Part 15

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz Band, may be present (embedded) in your notebook system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in the United States of America if an FCC ID number is on the system label.

The FCC has set a general guideline of 20 cm (8 inches) separation between the device and the body, for use of a wireless device near the body (this does not include extremities). This device should be used more than 20 cm (8 inches) from the body when wireless devices are on. The power output of the wireless device (or devices), which may be embedded in your notebook, is well below the RF exposure limits as set by the FCC.

This transmitter must not be collocated or operate in conjunction with any other antenna or transmitter.

Operation of this device is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Contact manufacturer for service.

**FCC Statement for Wireless LAN use:**
"While installing and operating this transmitter and antenna combination the radio frequency exposure limit of 1mW/cm2 may be exceeded at distances close to the antenna installed. Therefore, the user must maintain a minimum distance of 20cm from the antenna at all times. This device can not be colocated with another transmitter and transmitting antenna."

## FCC Part 68

This equipment compiles with part of the FCC rules. On the back of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

This equipment uses the following USOC jacks : RJ11C

An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or promises wiring using a compatible modular jack which is Part 68 compliant. See Installation Instructions for details.

The REN is used to determine the quantity of devices which may be connected to telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by total RENs, contact the local telephone company to determine the maximum REN for the calling area.

If the terminal equipment causes harm to the telephone network, the Telephone Company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advanced notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment (Modem) for repair or warranty information, please contact your local distributor. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

The user must use the accessories and cables supplied by the manufacturer to get optimum performance from the product.

No repairs may be done by the customer.

This equipment cannot be used on public coin phone service provided by the telephone company. Connection to party line service is subject to state tariffs.

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number provided may not be any number for which charges exceed local or long-distance transmission charges.)

In order to program this information into your fax machine, refer to your communications software user manual.

# Canada

## Unintentional Emitter per ICES-003

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limitesapplicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

## Intentional Emitter per RSS 210

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz Band, may be present (embedded) in your notebook system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in Canada if an Industry Canada ID number is on the system label.

As a general guideline, a separation of 20 cm (8 inches) between the wireless device and the body, for use of a wireless device near the body (this does not include extremities) is typical. This device should be used more than 20 cm (8 inches) from the body when wireless devices are on.

The power output of the wireless device (or devices), which may be embedded in your notebook, is well below the RF exposure limits as set by Industry Canada.

This transmitter must not be collocated or operate in conjunction with any other antenna or transmitter.

Operation of this device is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

To prevent radio interference to licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Contact manufacturer for service.

## Telecommunications per DOC notice (for products fitted with an IC-compliant modem)

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operation, and safety requirements. The Department does not guarantee the equipment will operate to the users' satisfaction.

Before installing this equipment, users should make sure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the inside wiring associated with a single-line individual service may be extended by means of a certified connector assembly. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should make sure, for their own protection, that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

To avoid electrical shock or equipment malfunction do not attempt to make electrical ground connections by yourself. Contact the appropriate inspection authority or an electrician, as appropriate.

The **Ringer Equivalence Number** (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

# European Union

The following information is only applicable to systems labeled with the CE mark CE.

## European Directives

This Information Technology Equipment has been tested and found to comply with the following European directives:

- EMC Directive 89/336/EEC with amending directives 92/31/EEC & 93/68/EEC as per
  - EN 55022 Class B
  - EN 61000-3-2
  - EN 61000-3-3
  - EN 55024
- Low Voltage Directive (Safety) 73/23/EEC as per EN 60950(A1/A2/A3/A4/A11)
- Radio and Telecom Terminal Equipment Directive 199/5/EC as per
  - CTR21 (if fitted with a modem device)
  - ETS 300 328 (if fitted with a 2.4 GHz band embedded wireless device)
  - ETS 301 489-1 (if fitted with a 2.4 GHz band embedded wireless device)
  - ETS 301 489-17 (if fitted with a 2.4 GHz band embedded wireless device)

## European Radio Approval Information (for products fitted with EU-approved radio devices)

This Product is a Notebook computer; low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz band, may be present (embedded) in your notebook system which is intended for home or office use. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in the European Union or associated areas if a CE mark CE with a Notified Body Registration Number and the Alert Symbol is on the system label.

The power output of the wireless device or devices that may be embedded in you notebook is well below the RF exposure limits as set by the European Commission through the R&TTE directive.

**European States qualified under wireless approvals:**

| | |
|---|---|
| **EU** | Austria, Belgium, Denmark, Finland, France (with frequency restrictions), Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden and the United Kingdom. |
| **Accept EU** | Iceland, Liechtenstein, Norway and Switzerland |

**European States with restrictions on use:**

| | |
|---|---|
| **EU** | In France, the frequency range is restricted to 2446.5-2483.5 MHz for devices above 10 mW transmitting power such as wireless LAN. |
| **Accept EU** | No limitations at this time. |

## European Telecommunication Information (for products fitted with EU-approved modems)

Marking by the symbol CE indicates compliance of this equipment to the Radio and Telecom Terminal Equipment Directive 1999/5/EC. Such marking is indicative that this equipment meets or exceeds the following technical standards:

CTR 21 – Attachment requirements for pan-European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of TE (excluding TE supporting voice telephony services) in which network addressing, if provided, is by means of Dual Tone Multi-Frequency (DTMF) signaling.

Although this equipment can use either loop disconnect (pulse) or DTMF (tone) signaling, only the performance of the DTMF signaling is subject to regulatory requirements for correct operation. It is therefore strongly recommended that the equipment is set to use DTMF signaling for access to public or private emergency services. DTMF signaling also provides faster call setup.

This equipment has been approved to Council Decision 98/482/EEC—"CTR 21" for Pan-European single terminal connection to the Public Switched Telephone Network (PSTN).

However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN termination point. In the event of problems, you should contact manufacturer Technical Support.

# Using Your Documentation

Congratulations on your purchase of a notebook computer with the Windows® XP operating system. Whether you are new to using a portable computer or are an experienced user, this user's manual can help you get the most from your computer.

## Manual Documentation Conventions

### Information Icons

Three icons and their associated messages appear in this manual. The information icons are placed before the step/information they apply to:

**Warning:**
Indicates the possibility of personal injury.

**Caution:**
Warns you of possible damage to equipment or data.

**Note:**
Informs you of special circumstances.

**Technical Information:**
Informs you of special requirements or limitations for use of item(s).

### Keyboard Conventions

Keys that you need to press to perform certain functions are displayed in the manual in brackets. For example:

**<Ctrl>** indicates the control key (**Ctrl** on the keyboard).

If you need to press two keys at the same time, the key names are shown joined by a plus sign. For example:

**<Fn+F8>** means that you should press the **Fn** key and hold it and then press the **F8** key.

## CD-ROM Device Naming Convention

In many installation programs you will have to get a program from the CD-ROM device. The program installation sequence assumes that the CD is drive d:\, however this is not always the case. The name of the CD-ROM drive is the letter following the letter assigned to your last HDD. For instance, if you have one HDD with two partitions, the HDD is drives C: and D: and the CD-ROM drive is then drive E.

## Touchpad Conventions

You may be asked to click or double-click on items on the display screen. As a general note the touchpad actions act much in the same way as a wheel mouse, any differences are explained fully.

The object that needs to be clicked upon will be displayed in **Bold** text or shown in a small figure such as the **"Start Button"** shown on the right =>.


*Table 1. Touchpad Click Conventions*

| Action | Process |
|---|---|
| **Click** | Depress the touchpad left button and release |
| **Double-click** | Quickly click the left touchpad button two times |

**Windows Conventions:**
Almost all "Windows" programs will display the name/function of a button or icon if you place the touchpad pointer on the item you want information about.

# Software User Documentation

Your computer is shipped from the factory with several software programs installed. The software may include its own online or printed documentation. Refer to the documentation or the Help options in the software for more information.

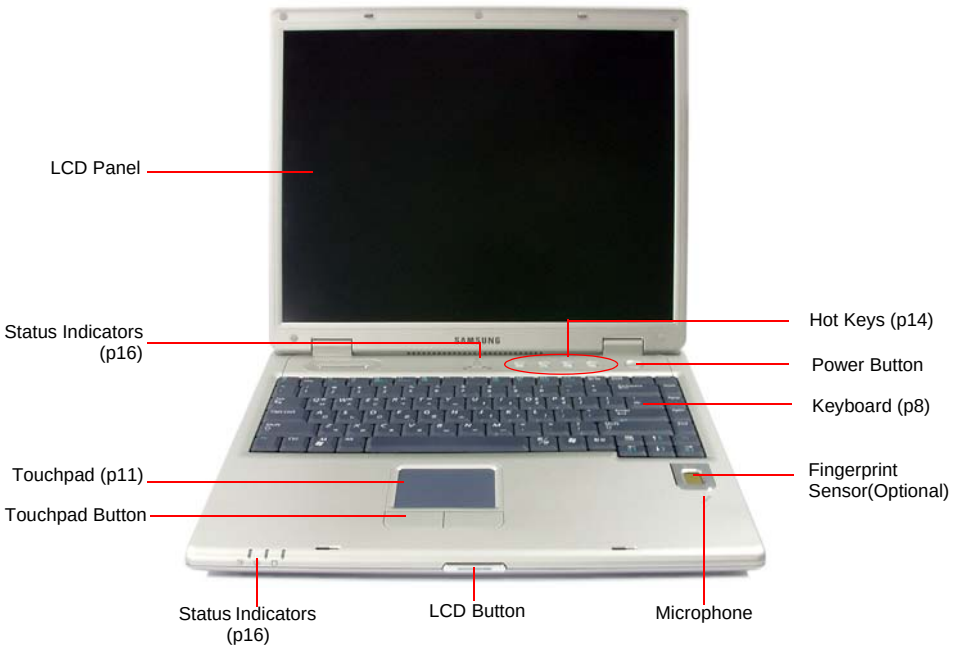
The figures and illustrations in this manual may not be identical to those on your system.

**General Icon Note:**
Some of the Icons used in Windows XP may be placed on the taskbar by selecting **(ex: Place the volume icon in the taskbar)** in the properties dialog box.

# Getting Started

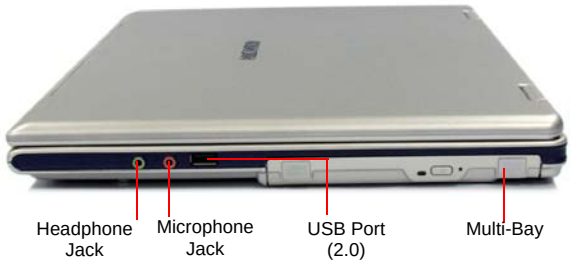
## Introducing Your Computer

### Front View



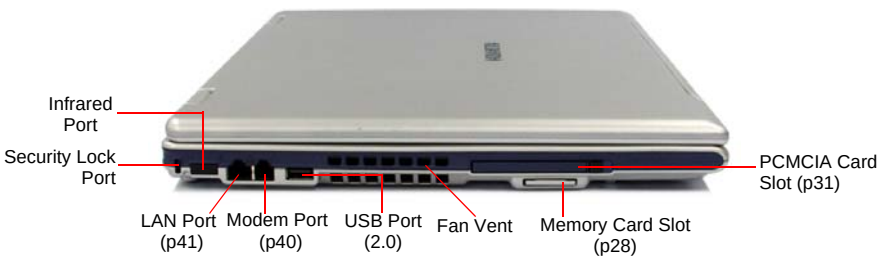

Fingerprint sensor is optional. For more information on using the fingerprint sensor, refer to the manual supplied with the device.

## Right View

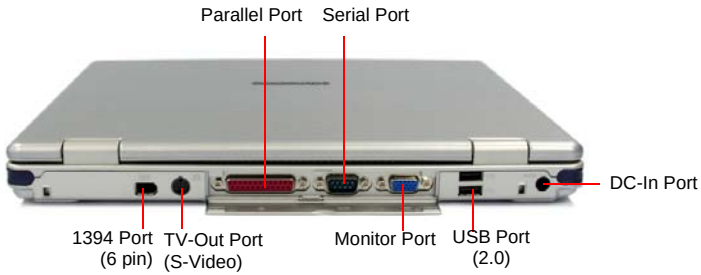



You can install various other multi-bay devices in the multi-bay of the system. Refer to (p 27).

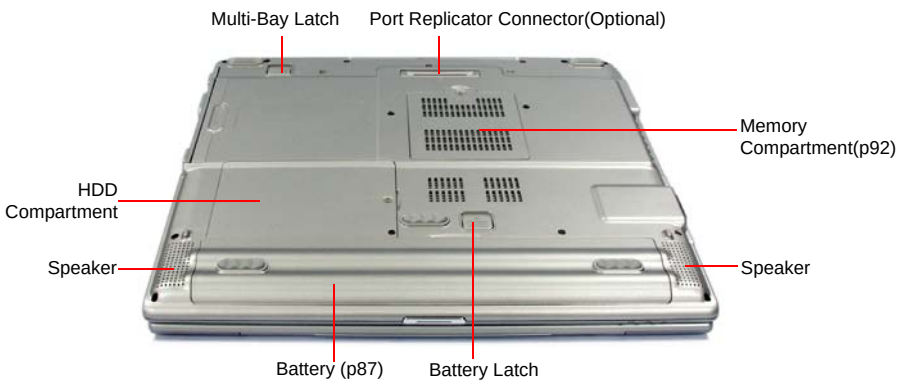
## Left View



## Back View




## Bottom View




Removing or disassembling the hard disk drive will void your warranty. To replace the hard disk drive, please contact your nearest Samsung Service Centre.

# Turning the Computer On and Off

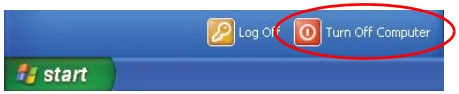
## To turn on the computer

1. Insert the battery and connect the AC adapter according to the Installation Guide.
2. Slide the LCD latch to the right and open the LCD panel.
3. Press the power button.

## To turn off the computer

1. Click the **start** button (

) on the taskbar.
2. Click **Turn Off Computer**.



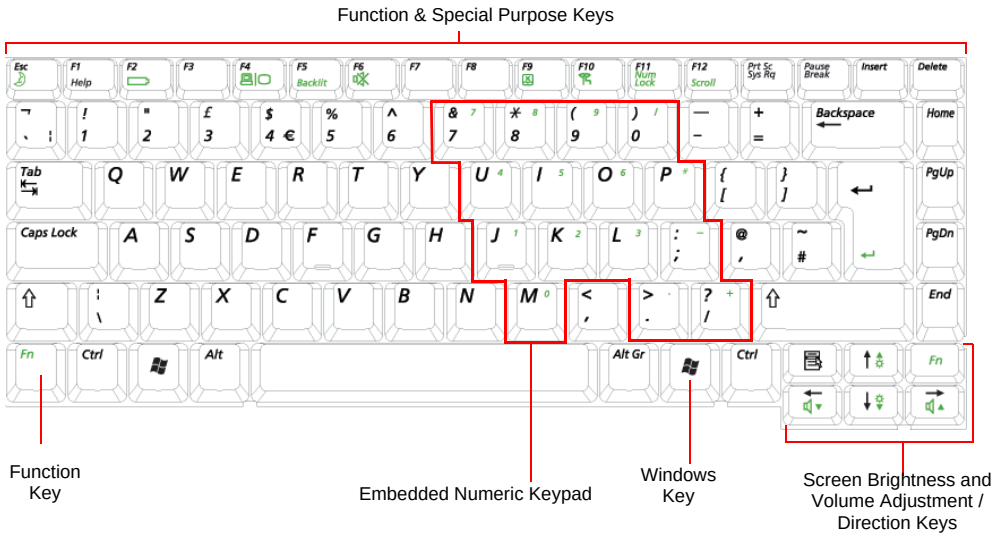

3. Click **Turn Off**.

If the computer is not turned off properly due to a system error, press **<Ctrl>+<Alt>+<Delete>**. When [Windows Task Manager] dialog box appears, click **Shut Down > Turn Off** to turn off the computer. Your unsaved work may be lost/damaged.

If **<Ctrl>+<Alt>+<Delete>** keys do not operate either, press the power button for more than 4 seconds to turn off the computer. Your unsaved work may be lost/damaged. When you turn on the computer next time, it will perform a disk checking process.

# Using the Keyboard

Your computer has an 89-key keyboard. By pressing designated key combinations, you can have access to all the key functions of a full-sized keyboard.


Function & Special Purpose Keys
Function Key
Embedded Numeric Keypad
Windows Key
Screen Brightness and Volume Adjustment / Direction Keys

Although the layout of the keys on your computer's keyboard is different from that on a desktop computer's keyboard, the keyboard feels like a full-sized keyboard when you use it.

You can use a symbol of €, if press Fn and F3 simultaneously depending on a kind of keyboard.

**The keys on the keyboard can be grouped into the following categories:**

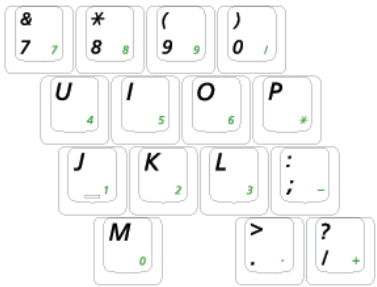
- Full-sized Alphanumeric typewriter keys are arranged like a standard typewriter keyboard and are used for text entry. The Windows keys on either side of the spacebar open Windows menus and perform other special functions.
- Function keys, when pressed together with the **<Fn>** key, enable special functions.
- Cursor and Screen control keys move the cursor. They may perform other functions, depending on your software.

To clean the computer keyboard, use slightly damp cotton swabs. Scrub the keys and the surface around the keys.

Do not allow liquid to drip into the keyboard or you may damage the keyboard.

## Using the Numeric Keypad

Your keyboard includes a numeric keypad, which is a group of keys that you can set to type numbers and mathematical symbols, such as the plus sign. A number or symbol on the corner of each keypad key shows its numeric function.




Press **<Fn+Num Lock>** to turn on the embedded numeric keypad. The numeric functions of the keypad are enabled and the Num Lock LED turns on. (See ”Reading the Status Indicators” on page 16 for the location of the Num Lock LED.)

While the numeric functions are enabled, you can temporarily return a key to its normal function by pressing the key and the **<Fn>** key. For example to type the letter *m*, press **<Fn+M>**, this operation displays the letter **m**.

To turn the numeric keypad off, press **<Fn+Num Lock>** again. The Num Lock LED turns off.

## Using Special Function Keys

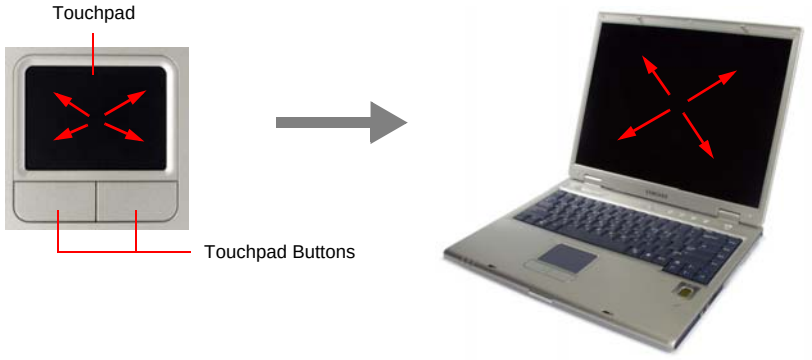
The function key activates special functions when it is pressed in combination with another keys.

| <Fn> Key Combinations | Key Name | Key Function |
|---|---|---|
| **<Esc/ >** | Rest | Puts the computer into suspended mode. To escape suspended mode, press the power button. (p83). |
| **<F2/ >** | Gauge | Shows the current power source and the remaining battery charge. |
| **<F4/ >** | LCD/CRT | Switches the display between the LCD and external display device when an external display device is connected. (p81) |
| **<F5/Backlit>** | Backlight | Turns the LCD on and off. |
| **<F6/Mute>** | Mute | Turns the audio output on and off. |
| **<F9/ >** | Touchpad | Turns the touchpad function on and off. |
| **<F10/ >** | Low-Noise Mode | You can select Low-Noise Mode when you need a tranquil work environment.<br><br>Caution. In low-noise mode, the operational speed of a program will be slowed down because the CPU operating at minimum speed, and the system may overheat if used continuously in this mode becasue the fan is rotating only at low speed.<br>Note. The Celeron-M CPU does not support low noise mode by using the keyboard. |
| **<F11/Num Lock>** | Number Lock | Enables the numeric keypad. (p9) |
| **<F12/Scroll>** | Scroll Lock | Scrolls the screen up and down while the cursor position does not change in some applications. |
| **< / >** | Volume Down | Decreases the audio volume. |
| **< / >** | Volume Up | Increases the audio volume. |
| **< / >** | Brightness Up | Makes the LCD screen brighter. |
| **< / >** | Brightness Down | Makes the LCD screen dimmer. |

When you press a function key combination, the system sound may be temporarily muted.

# Using the Touchpad

In Windows, you always see a small graphical image on the screen that indicates the location where you can take the next action. This image is called a pointer, and is usually displayed in arrow shape ( ) or 'I' shape ( ).



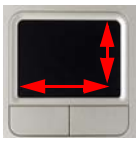

The touchpad on your computer allows you to move the pointer on the LCD screen, just like a mouse that is used with a desktop computer. The touchpad buttons allow you to take actions with the pointer, such as selecting an item or executing a command.

**Locking the touchpad**

You can lock the touchpad and use only the keyboard and mouse. To lock the touchpad function, press the **<Fn>**+**<F9>** key combination.

You can perform various actions with your touchpad as described below.

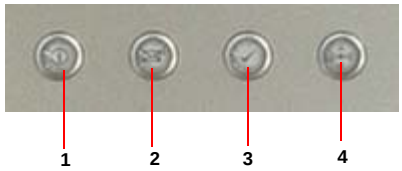
| Action | Function | Process |
|---|---|---|
| **Move** | Move the pointer | Place your finger on the touchpad and slide your finger to a destination. |
| **Click** | Select an object, open a menu, or execute a button | Place the pointer over an object, then press left touchpad button once.<br><br>Or, place the pointer over an object, then tap the touchpad once with your finger. |
| **Double-Click** | Launch a program or open a file | Place the pointer over an object, then quickly press left touchpad button twice.<br><br>Or, place the pointer over an object, then quickly tap the touchpad twice with your finger. |
| **Right-Click** | Display a short cut menu | Place the pointer over an object, then press right touchpad button once. |
| **Drag** | Move an object, or select an area or multiple objects | Drag and drop a part to the required place. |

| Action | Function | Process |
| --- | --- | --- |
| **Scroll**  | Display upper/lower/left/right part of the content within a window<br><br>(Applicable to certain programs only) | Place your finger on the right edge or bottom edge of the touchpad and move vertically or horizontally. |

Please use the touchpad only with your finger. Using sharp devices may damage the touchpad.

Operating the touchpad or touchpad button while starting your system may increase the time required for starting Windows.

# Hot Keys




| Num | Name | Function |
|---|---|---|
| 1 | **Internet Butto** | Launches Internet Explorer. |
| 2 | **E-Mail Button** | Launches Outlook Express. |
| 3 | **User 1 Button** | You can launch a frequently used program by pressing the button. By default, Windows Calculator is configured to be launched when you press this button. |
| 4 | **WLAN/Bluetooth or User 2 Button** | Turns on and off the wireless LAN/Bluetooth function for the models with wireless LAN/Bluetooth function.<br>Launches a user defined program for the models without wireless LAN/ Bluetooth function. |

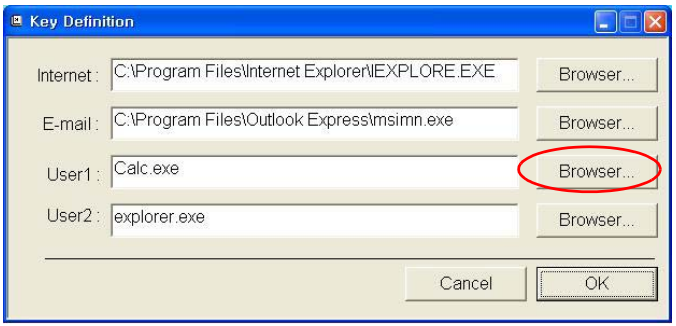
**About the Wireless LAN Button**

Turning the wireless LAN on or off takes about 5 seconds. Pressing this button will not work for approx. 5 seconds after the last time the button was pushed.

## Changing the Hot Key Setting

You can change the program that will be launched when you press a hot key. As default, Windows Calculator is configured to launch when you press the User 1 button. You can set the program by completing the following procedure.

1. Double-click the **Key Define Utility** icon ( ) on the taskbar.
2. Click **Browser** in the **User 1** item.




3. Select the desired program in [Open] dialog box, and click **Open**. (Example: Paint)
4. Click **OK** to save the changes.

# Reading the Status Indicators

Shows the operating status of the computer.

| | | |
|---|---|---|
| | **Num Lock** | Turns on when the numeric keypad is activated. |
| | **Caps Lock** | Turns on when all alphabet characters you type will be in upper case. |
| | **Scroll Lock** | Turns on when it is set to scroll the screen up and down while the cursor position does not change in some applications. |
| | **Battery** | Turned blue - when the battery is fully charged, or when the battery is not installed.<br>Turns amber - when the battery is being charged.<br>Blinks - when the battery is not properly installed. |
| | **Power** | Turned On - when the computer is turned on.<br>Blinks - when the computer is in Standby mode. |
| | **Hard disk drive** | Blinks when the hard disk drive is in operation. |

# Adjusting LCD Brightness

There are 16 levels of LCD brightness (1: Dimmest ~ 16: Brightest).

Press <Fn>+< ↓ / ☼▾ > or <Fn>+< ↑ / ☼▴ > keys from the keyboard to adjust LCD brightness. When changed, the current LCD brightness is displayed on the top left corner of the LCD screen for a few seconds.

Whenever you turn the system on or change the power source the brightness level changes according to the settings.

- when operating on AC power: Brightness Level 16
- when operating on battery power: Brightness Level 2

**Maintaining your LCD brightness settings after turning the system off and on**

1. Turn the system on. When the Samsung Logo appears, press the <F2> key to enter Setup.
2. In the **Boot** menu, change the **Brightness Control Mode** option to **User Control**.
3. Save the settings and exit Setup.

**To save the battery charge**

When your computer is operating on battery power, adjusting the LCD brightness level to dimmer diminishes the battery power consumption.

**Bad pixels in the LCD**

The limits of the LCD manufacturing technology allow a maximum of 10 abnormal or bad pixels, which do not affect system performance. This system may have the same level of abnormal or bad pixels as any other company's products.

**Maintenance Instructions**

When cleaning the LCD panel, use only computer specific cleaners on a soft cloth, and lightly wipe in one direction.

# Adjusting the Volume

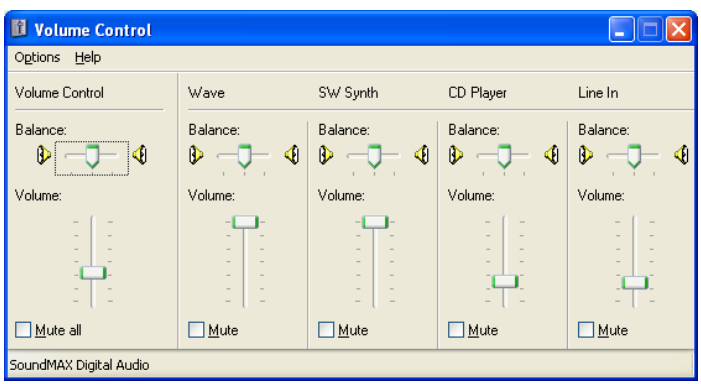
## To adjust using keyboard

Press <**Fn**>+< ← / 🔉 > or <**Fn**>+< → / 🔊 > from the keyboard. The changed volume level is displayed on the upper part of the screen for a few seconds.

## To adjust using volume adjustment program

Click the **Volume** icon( ) on the taskbar, and move the Volume slider to a desired level.

For advanced volume control options, double-click the **Volume** icon( ), and adjust the volume level in the volume control program.




When you turn the system on, a booting noise may occur.

# Introducing Windows

## Understanding the Desktop

The desktop is the working area on the computer. It consists of the large workspace and a taskbar at the bottom.

| | | |
|---|---|---|
| **Start Button** | | Opens the Start menu. |
| **Taskbar** | | Displays programs that are currently running. Frequently used icons can be placed here. |
| **Recycle Bin** | | Deleted files or folders are sent here. |
| **Language Bar** | | Switches text input language. |

# Understanding the Start Menu

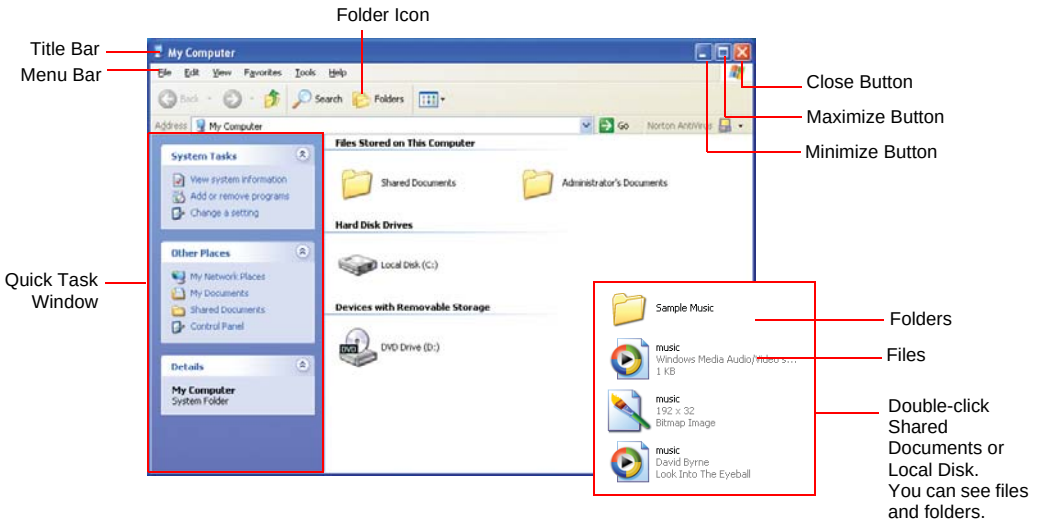
The Start menu includes everything that is required to start Windows. From the Start menu it is possible to run a program, open a file, assign system users with Control Panel, receive support by clicking Help and Support, and search desired items from the computer or Internet by clicking Search.

| | | |
|---|---|---|
| **My Computer** | | Displays the contents of the hard disk, the CD-ROM drive, the network drive(s), and floppy disks. It can also be used to search and open files and folders. |
| **Control Panel** | | Enables users to configure settings on the computer. |
| **Help and Support** | | Provides on-line help, information on Windows and troubleshooting. |
| **Search** | | Enables users to search for information in files or the Internet. |
| **Run** | | Run programs or documents. |

# Understanding a Window

A window is the basic component in working with the computer. The My Computer window, which is a window for the computer's hard drive, will be used as an example here to show the basic composition of a window.

Click **Start > My Computer**.




Double-click the hard drive (local disk) to view internal folders and files stored in it. If the contents do not appear, click **Show the contents of this folder**.

**What is a drive?**
A storage device in which files and folders are saved in, and read from.

**What is a folder?**
A folder is used to group and manage files systematically, and may include files in sub-folders. It is similar to a bookshelf.

**What is a file?**
A file is a document or various kinds of material that is generated as a result of program operation. It is also called data.

**To view the entire structure of the drive**
Click the Folder icon in the taskbar to view the entire structure. Click again to return to the Quick Task Window.

## Help and Support Center

Help and Support Center provides references and troubleshooting information regarding computer use.

Click **Start > Help and Support**.

## Windows XP Tour

You can tour elementary functions provided by Windows XP.

Click **Start > Tour Windows XP**.

Or click **Start > All Programs > Accessories > Tour Windows XP**.

Click on the topics to find out about important functions of Windows XP.

# Using the Computer

## Using the CD Drive

You have one of following drives installed in your computer.

| | |
|---|---|
| **DVD-ROM drive** | Reads a CD/DVD. |
| **CD-RW/DVD-ROM Combo drive** | Reads a CD/DVD and writes a CD. |
| **DVD Super Multi Drive** | Reads CD/DVDs and writes data to CD/DVDs. Supported DVD types include DVD ± R, DVD ± RW and DVD-RAM. |

1. Press the eject button on right side of the CD drive.
2. When the tray slides out, place a CD onto the tray with the label facing up, and push the CD down until it clicks.

3. Push the tray in gently until it clicks.

If you remove the CD when the CD access LED is on, the disk and the data in it may be damaged.

**Emergency Eject Hole**
To eject a CD when the CD drive is not working or the computer is turned off, unfold a paperclip, and insert the unfolded end of the clip into the emergency eject hole (located next to the eject button) and press until the CD tray opens.

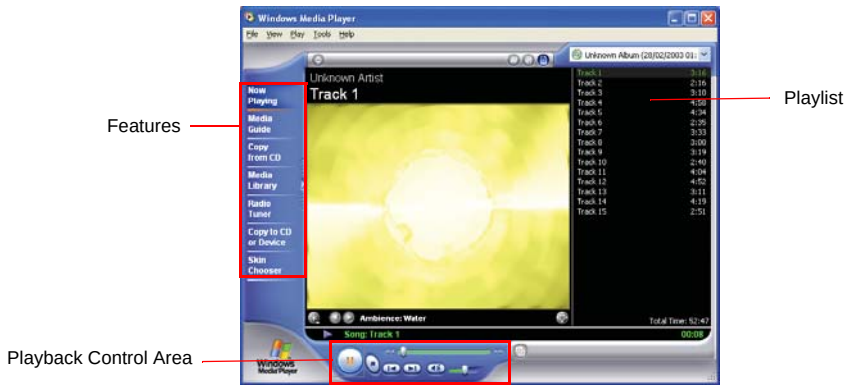
**To clean a CD or DVD title**
Clean the disc with a soft clean cloth by wiping from the center outwards.

**To play a DVD**
You have to install the DVD software provided on a separate CD to view a DVD title.

## To use the Windows Media Player

The Windows Media Player allows you to play audio and video files from the computer or the Internet.

To launch the Windows Media Player, click **Start** > **All Programs** > **Accessories** > **Entertainment** > **Windows Media Player**.




**Windows Media Player tour**
For more information about using the Windows Media Player, run the Windows Media Player and click **Help > Help Item**.

## To play a video CD

If a video CD does not run automatically, follow these steps.

1. Insert a video CD into the CD drive.
2. When the CD drive window appears, double-click the MPEGAV folder.
3. Double-click the .dat file.
4. When the [Caution] dialog appears, click **Open With**.
5. Select “Select the program from a list” and click **OK**.
6. Select the **Windows Media Player**, and click **OK**. The video starts playing.

Above procedure applies only to the video CDs that has a .dat file as the execution file. Playing procedure may be different according to video CDs.

## To write data on a CD (Option)

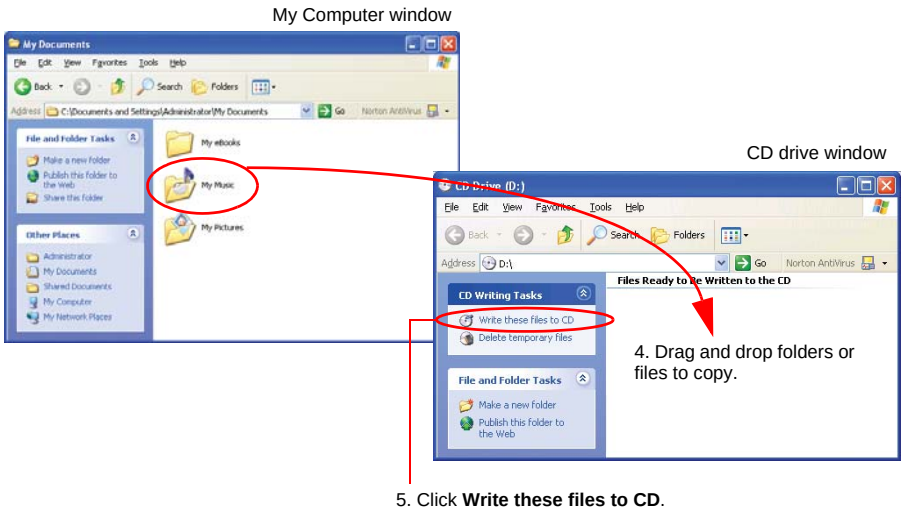
If your computer has CD-RW functionality, you can copy data to a blank CD or create an audio CD.

An additional CD writing program is supplied in an additional CD.

You cannot write to a CD that already has data in it.

1. Insert a blank CD into the CD drive.
2. On the [CD Drive] dialog, select **Open Writable CD Folder** and click **OK**. The CD drive window appears.
3. Click **Start** > **My Computer**.

4. In My Computer window, select files and folders to copy, then drag and drop them onto the CD drive window.




5. Click **Write these files to CD** in the CD drive window.
6. When the CD Writing Wizard appears, enter the CD label, and click **Next**. The data begins copying.
7. When copying is completed, a ‘completed’ message appears and the CD drive window opens automatically.

**For more information on writing CDs**
Click **Start > Help and Support**. Type “CD copy” in the search field, and click the **Search** icon ( ).

**For more information on creating an audio CD**
Run the Windows Media Player program, click the **Help > Help Item**. Click Using Windows Media Player > Using CDs > Creating your own CDs > To create your own CD.

# Using the Multi-Bay

Multi-Bay provides space for CD drive installations. You can replace the CD drive with various other types of drives.

The procedures to replace the drive installed in the Multi-Bay with other drives are described below.

**Before Replacing the Multi-Bay**

Replace the Multi-Bay only after turning the computer off.

1. Turn off the computer.
2. While holding the Multi-Bay latch to the UNLOCK position, remove the installed drive.

3. Insert a new drive into the Multi-Bay completely, and make sure that the latch is in the LOCK position.

# Using Memory Card Slot

You can use a Memory Stick (or Memory Stick Pro) and a SD (Secure Digital) card using the memory card slot. You can use the Memory Stick and the SD card as removable disks and can use them to transfer data between your computer and any digital equipment such as a digital camera..

Memory Stick

Memory Stick

SD (Secure Digital) Memory Card

**Restrictions when Using Memory Sticks / SD Cards**

You can use Memory Stick, SD Memory Card and Memory Stick Pro for storing data only. Copyright protection function is not supported.

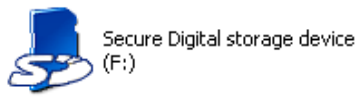
## To insert and use a memory card

**Before using the memory card slot, remove the slot protector.**
Press the end of the slot protector softly to pop it outward, then remove it.

1. Insert the memory card into the memory card slot.

2. Click **Start** > **My Computer**. The inserted memory card is displayed.

Memory Stick




SD Card

3. You can write data to the memory card. If the memory card is not formatted yet, format the memory card before use.

Since the memory card may be easily mislaid when moving your computer, keep the memory card separately.

## To remove a memory card

1. Press the end of the memory card softly to pop it outward.
2. Remove the memory card.

## To format a memory card

You can use a memory card after the format operation. The procedures to format a memory card are described below.

Since format operation deletes all data in the memory card, please make sure that there is no important data in the memory card before formatting.

**To protect the data in the memory card**
Set the write protection tab of the Memory Stick or SD memory card to the Lock position.

1. Click **Start** > **My computer**.
2. Press the right touchpad button on the memory card drive, and select **Format** from the pop-up menu.
3. Click **Start** to start the format operation.

To use a memory card in both the computer and other digital device such as digital camera, it is recommended to format the memory card in the digital device. If you format the memory card in the computer, you may have to format the memory card in other digital device again to use the memory card in the digital device.

**To use a Memory Stick Duo**
Insert a Memory Stick Duo into the Memory Stick Duo adapter and insert the adapter into the Memory Stick slot of the computer.

# Using the PCMCIA Card Slot

Various different functions can be added by inserting PCMCIA cards into the system. This system supports 16/32 bit, type I or II PCMCIA card types.

The PCMCIA card slot does not support a ZV card or a PCMCIA III card.

## To insert a PCMCIA card

1. Insert a PCMCIA card into the PCMCIA card slot on the side of the computer.

Ensure that the PCMCIA card is inserted the correct way, as incorrect insertion will damage the PCMCIA card slot.

2. Windows automatically installs the necessary driver for the card. If there is no available driver found by Windows, you have to install the driver using a disk supplied with the card.

## To remove a PCMCIA card

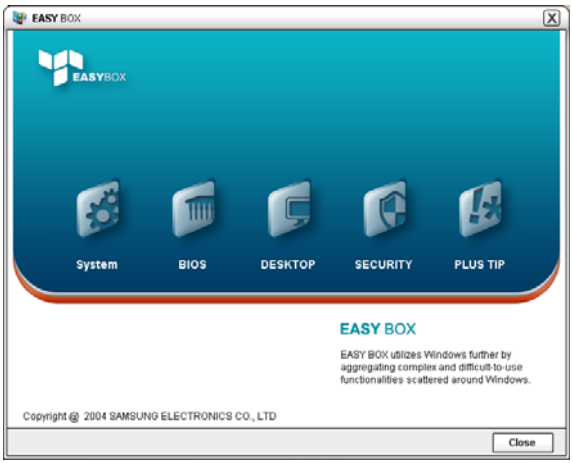
1. Double-click **Safely Removes Hardware** icon ( ) on the taskbar.
2. On the [Safely Remove Hardware] dialog box, select the appropriate PCMCIA card and click **Stop**.
3. When [Stop a Hardware Device] dialog box appears, click **OK**.
4. Click **Close** to close the [Safely Remove Hardware] dialog box.
5. Push eject button of the PCMCIA card slot once, and the button pops out.
6. Push the button again to eject the PCMCIA card.

# Using EasyBox

Use EasyBox program to make use of Windows' complicated function easily and conveniently.

## Learn about EasyBox

Double-click the **EasyBox(** **)** icon on the desktop.
(Or select **Start** > **All Programs** > **Samsung** > **EasyBox** > **EasyBox**.)




- **System**: System management features are available, including disk defragmenter, removing unnecessary files/folders, computer scheduling and system recovery.
- **BIOS**: In windows-based mode, you can recover the BIOS defaults and change the boot sequence.
- **Desktop**: Desktop management features include changing the font size, executing a magnifier function, the start menu settings and managing the quick launch icons on the taskbar.
- **Security**: Here you can configure the security settings supported by Windows XP SP2. And you can change the configuration of the firewall settings, Windows automatic updates and blocking pop-ups when connected to the Internet.

- **Plus Tip**: This is a collection of additional Windows functions that are useful for system management. (Offering shortcut descriptions of Windows, configuring network sharing and opening local folder sharing, etc.)

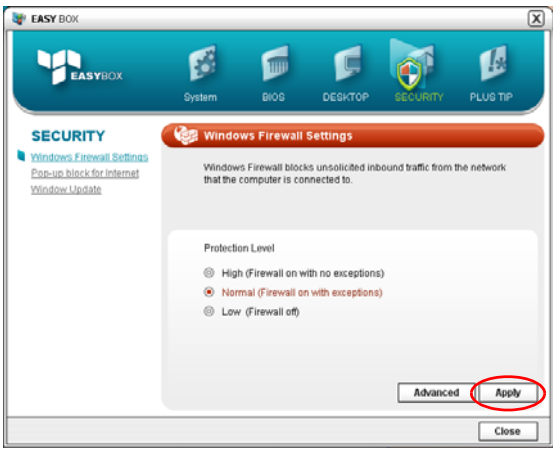
## Using EasyBox

Security management function will be used as an example here to show the function of Easybox

### *Configuring Firewall*

The Windows Firewall prevents unauthorized users from gaining access to your system via the network or the Internet.

1. Click **Start** > **All Programs** > **Samsung** > **EasyBox** > **EasyBox**.
2. Click **Security** from the top menu bar.
3. Select **Windows Firewall Settings** from the Security menu on the left.
4. Select a firewall level.
5. Click **Apply**.



Click the User Setting button for advanced features, including exceptions and permissions.

# Using Samsung Smart Screen

Use Samsung Smart Screen program to arrange desktop icons as desired and manage them effectively.

1. Click **Start** > **All Programs** > **Samsung** > **Samsung Smart Screen**.

When you launch Samsung Smart Screen for the first time, a dialog box asking whether to register the program as a start program or not appears. If you select OK, the program is automatically launched when you start your computer.

2. Samsung Smart Screen appears. When you run the program for the first time, water drop image is displayed.

Click a water drop to open and close the group.

3. To move an icon, click a water drop to open it, then drag an icon to another water drop.

**To return to Windows desktop**

Right-click on Samsung Smart Screen and click **Windows desktop**. Windows desktop is displayed.

To return to Samsung Smart Screen, double-click ( ) icon on the taskbar.

**To change background or skin**

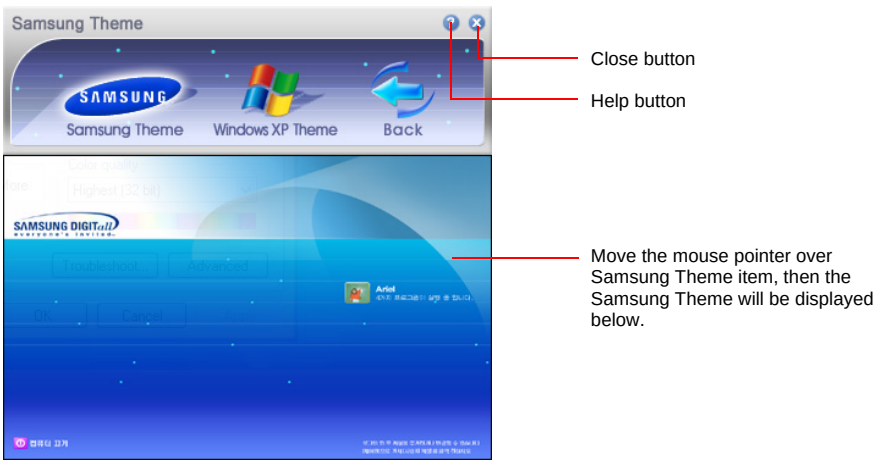
Right-click on Samsung Smart Screen and select desired item.

# Using Samsung Theme

Samsung Theme is a program that enables a user to easily switch a theme (desktop, logon screen and sound effect).

Double-click the **Samsung Theme** ( ) icon on the desktop.

(Or select **Start > All Programs > Samsung > Samsung Theme > Samsung Theme**.)




- **Samsung Theme**: Switches to Samsung Theme (desktop, logon screen and sound effects on booting).
- **Windows XP Theme**: Switches to the Windows XP default Theme.
- **Back**: Restores the theme to its previous status.

# Using Samsung Update Plus

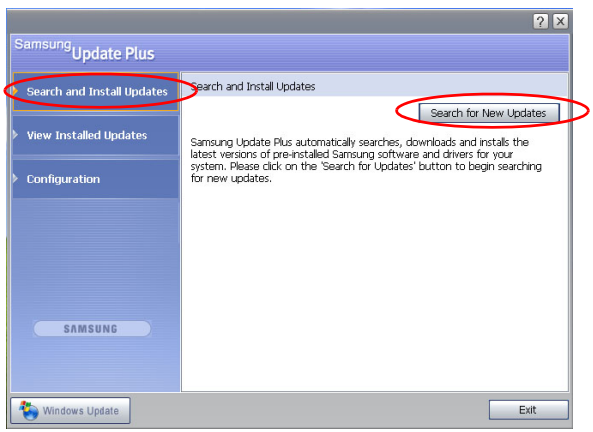
Samsung Update Plus is software that examines and updates Samsung software and drivers installed on your Samsung computer to the latest version. To use Samsung Update Plus, your computer has to be connected to the Internet.

## To Update Samsung Software and Drivers

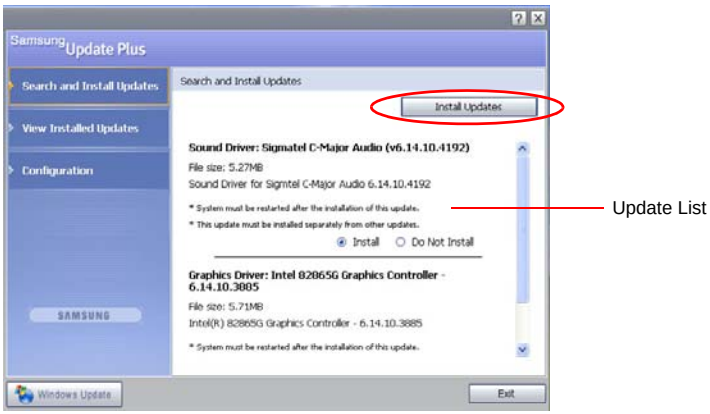
1. Select **Start** > **All Programs** > **Samsung** > **Samsung Update Plus** > **Samsung Update Plus**.

If this is the first time you are running the program, a window will appear asking you if you agree to the agreement in the window.
Click Agree to use this software.

2. Click **Search for and Install Updates** and click the **Search for New Updates** button.


Samsung Update Plus
Search and Install Updates
View Installed Updates
Configuration
SAMSUNG
Search and Install Updates
Search for New Updates
Samsung Update Plus automatically searches, downloads and installs the latest versions of pre-installed Samsung software and drivers for your system. Please click on the 'Search for Updates' button to begin searching for new updates.
Windows Update
Exit

3. If there are available software or driver updates for your computer, the available updates will be listed. Select the required updates from the list and click **Install Update** to start the update.


Samsung Update Plus
Search and Install Updates
View Installed Updates
Configuration
SAMSUNG
Search and Install Updates
Install Updates
Sound Driver: Sigmatel C-Major Audio (v6.14.10.4192)
File size: 5.27MB
Sound Driver for Sigmtel C-Major Audio 6.14.10.4192
* System must be restarted after the installation of this update.
* This update must be installed separately from other updates.
Install
Do Not Install
Graphics Driver: Intel 82865G Graphics Controller - 6.14.10.3885
File size: 5.71MB
Intel(R) 82865G Graphics Controller - 6.14.10.3885
* System must be restarted after the installation of this update.
Windows Update
Exit
Update List

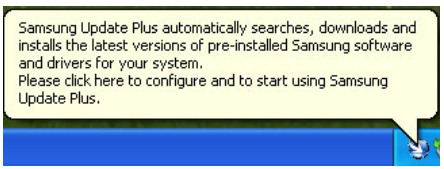
(The update list on the screen may differ depending on the computer model.)

Updates that must be installed separately.

If you select **Install** as an update item that must be installed separately, a message appears informing you of this. Follow the instruction message to correctly install it.

Automatic update items display

By default, your computer is configured to automatically search for updates. If there is a new update available, this is notified in the notification area. Click the balloon help icon in the notification area. Here you will be able to find the latest available updates.


Samsung Update Plus automatically searches, downloads and installs the latest versions of pre-installed Samsung software and drivers for your system.
Please click here to configure and to start using Samsung Update Plus.

To change the automatic update settings, click the **Configuration** button in Figure 2 and change the settings.

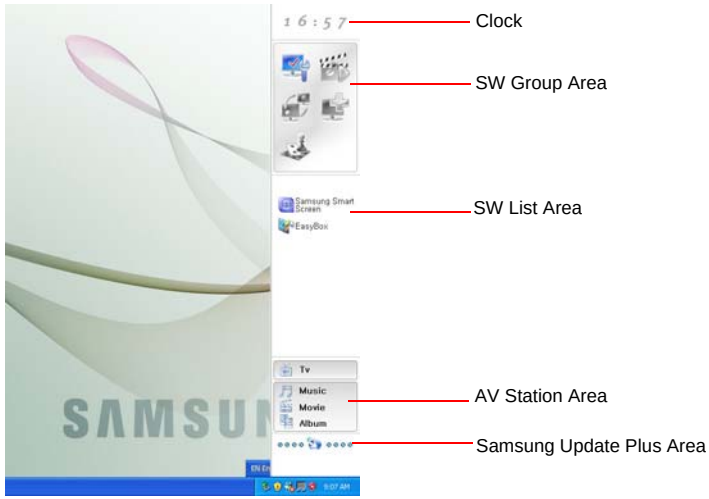
Samsung Update Plus does not provide updates for additionally installed software and device drivers.

# Using Samsung Command Center

Samsung Command Center is a program that enables the easy management of software provided for a Samsung computer. You can view brief descriptions of some programs and you can launch the programs directly. Samsung Command Center is always hidden automatically and it appears when you place the mouse cursor in the right-most position.

Select **Start > All Programs > Samsung > Samsung Command Center > Samsung Command Center.**

The Samsung Command Center screen consists of the following 4 areas.




- **S/W Group Area** : You can classify programs into 5 groups, these being System, Utility, Network, Support, and Entertainment and manage them. You can add a file that can be launched directly from the Desktop or Explorer (Files that have the extension of .cmd, .bat, .pif, .scf, .exe, .com, .lnk, or .scr ) by dragging and dropping them.
- **S/W List Area** : Shows software included in the S/W group. You can add a file that can be launched directly from the Desktop or Explorer by dragging and dropping it. Some Samsung software is automatically added or removed from the list when the software is installed or removed. If you move

the cursor over the software in the list, you can view a brief description and the Run button to launch.

- **AV Station Area** : This only appears when the AV Station program has been installed.
  You can easily launch the TV, music, movie or album player of the AV Station program. Drag and drop a media file from the Desktop or Explorer over any of the buttons to launch the corresponding player.
- **Samsung Update Plus Area** : When there is new software or a new driver, the Samsung Update Plus notification window appears.
  If you click on the notification window, Samsung update Plus is launched and an update is performed with a percentage number indicating the progress status.

# Connecting to the Internet

## Connecting with a Modem

**Before Start:**

- Prepare a telephone line that is not digital.
- Contact an internet service provider (ISP) for instructions on how to connect to and disconnect from the Internet.

**1.** Connect a telephone line to the computer's modem port.

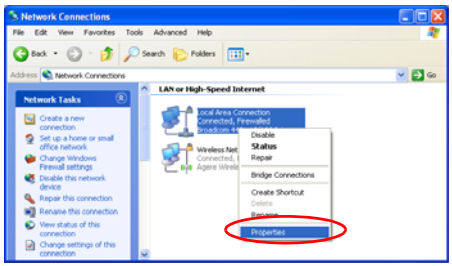
**2.** Connect to the Internet according to the instructions provided by your ISP.

If the Internet connection is not disconnected properly, additional telephone charges may be imposed.

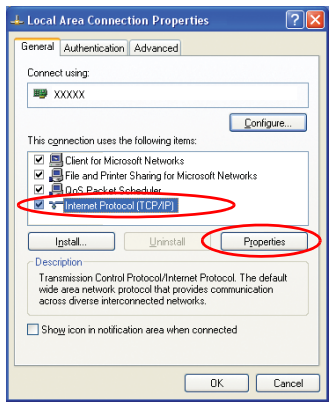
## Connecting Through a Wired LAN

1. Connect a LAN cable to the computer's LAN port.

2. Click **Start** > **Control Panel**.
3. Click **Network and Internet Connections** in the [Control Panel] window.
4. Click **Network Connections** in the [Network and Internet Connections] window.
5. Right-click the **Local Area Connection** icon and click **Properties**.



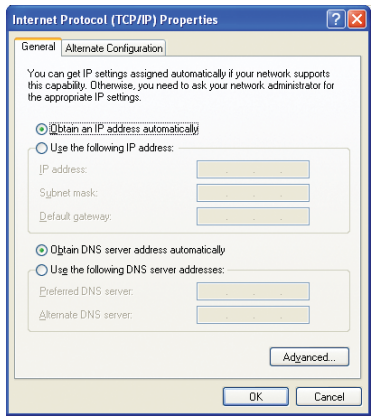
6. On the **General** tab, select “Internet Protocol(TCP/IP)” and click **Properties**.




7. **To use DHCP:**
On the **General** tab, select “Obtain an IP address automatically” and “Obtain DNS server address automatically”. Click **OK**.

**To use a static IP:**
On the **General** tab, select “Use the following IP address” and fill in the IP address, Subnet mask, Default gateway, Preferred DNS server, and Alternative DNS server fields. Click **OK**.

**To use both DHCP and static IP simultaneously:**
On the **Alternate Configuration** tab, click **User configured** and fill in the fields. Click **OK**.


Internet Protocol (TCP/IP) Properties
General
Alternate Configuration
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

## Using Samsung Network Manager

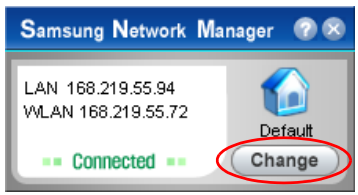
Use Samsung Network Manager to configure network setting.

Using the program, you can do the following.

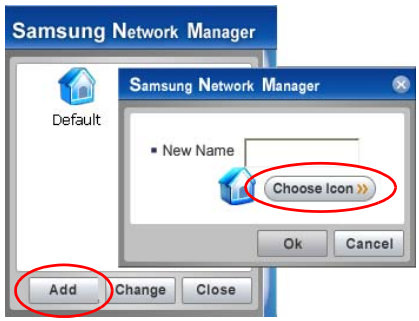
- You can save network settings (including IP address) according to network places such as office and home. When you change places, simply select a network place and the network settings will be automatically changed accordingly.
- You can easily find out your current IP.

### *To configure network setting*

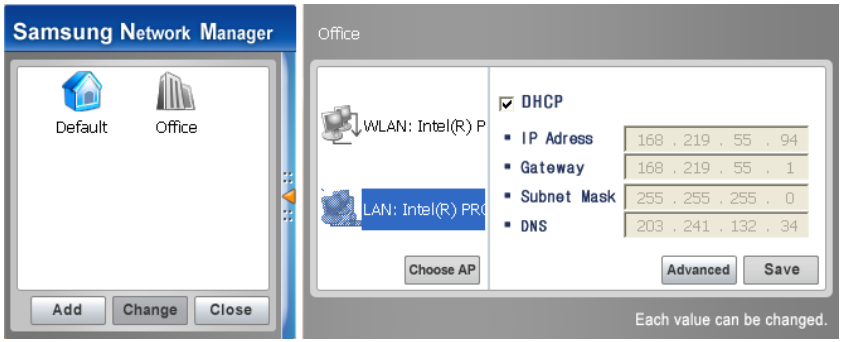
1. Connect LAN cable to the computer's LAN port.
2. Double-click **Samsung Network Manager** icon on the desktop.
   Or click **Start > All Programs > Samsung Network Manager > Samsung Network Manager**.
3. When you are using DHCP, available IP's are displayed in the status dialog box. Click **Change**.




4. Click **Add**, click **Choose Icon** and select an icon. Enter a place name in New Name field and click **Ok**.



5. New place icon is displayed and full dialog box appears. Check your IP and click **Close**. Network setting is saved.




To configure network setting of some place other than current place, click the place icon and configure each network device. If you are using DHCP, select 'DHCP' check box and click **Save**.

If you are using a static IP, clear 'DHCP' check box, enter appropriate network setting and click **Save**.

Ask ISP or network administrator for IP address.

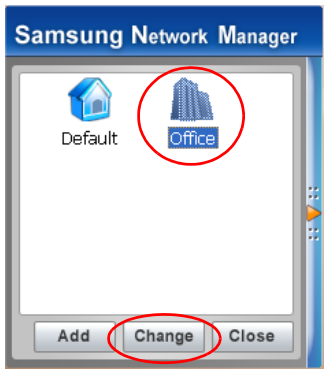
## *To change network places*

You can change network places as below.

1. Connect LAN cable to the computer's LAN port, and double-click **Samsung Network Manager** icon on the desktop.

If you used static IP in previous place, previous static IP is displayed in the status dialog box.

2. Click **Change**, select a place icon then click **Change**.




Example) changing to Office

3. On "Do you want to change the location setting?" dialog box, click **Ok**.
4. When the network place is changed, corresponding place icon is displayed in color and full dialog box appears. In the right area of full dialog box, network setting is displayed.
5. Click **Close** to close the dialog box.

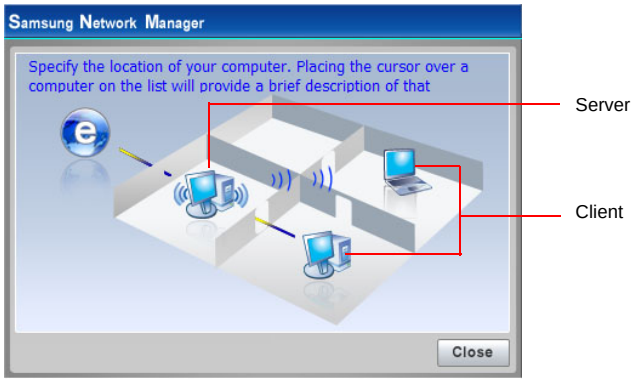
## *To share an Internet connection*

Using Internet Connect Share, you can use the Internet by connecting to a computer connected to the Internet, even if your computer does not have a direct Internet connection.
You can setup the server, which is a computer directly connected to the Internet and which provides the Internet Connection Share service, and the client, which is a computer that will use the Internet Connection Share service.

### To configure the server

1. Connect the network (LAN) cable and double-click the Samsung Network Manager icon on the Desktop.
2. Click **Click here to setup Internet Connection Share.**

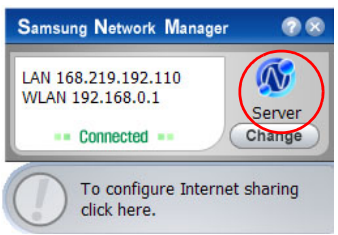
3. The computers are represented by an icon. Click the server computer.


Samsung Network Manager
Specify the location of your computer. Placing the cursor over a computer on the list will provide a brief description of that
Server
Client
Close

4. In the server, select a device that is directly connected to the Internet.

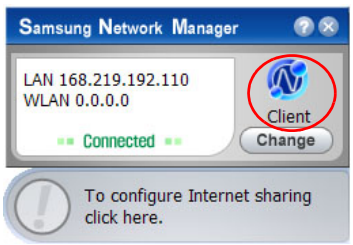
If you select Use Firewall, you can use the Windows Firewall.If you are using an external modem, select the network card connected to the external modem.

5. The network types connecting to the server and client will be displayed. Select a network type and then click **OK**.
6. Your configuration is displayed such as the Internet Connection, Use Firewall, Home Network Connection, etc. Confirm your configuration and click **OK** to begin the Internet Connection Share setup.
7. Configure the connection between the server and the client.
   If it is a wireless connection, the wireless network connection properties window and the wireless network setup procedure instruction window appear.
   Setup your wireless network according to the messages of the wireless network setup procedure instruction window.
8. The current location is represented as a server. The server configuration is complete.



**To configure the client**

1. Connect the network (LAN) cable and double-click the Samsung Network Manager icon on the Desktop.
2. Click **Click here to setup Internet Connection Share.**
3. The computers are represented by icons. Click the client computer.
4. Select a network to connect to the server and click **OK**.
   If it is a wireless connection, the wireless network connection properties and the wireless network setup procedure instruction windows will appear.
   Setup your wireless network according to the messages of the wireless network setup procedure instruction window.
5. The current location is represented as the client. The client configuration is complete.



# Connecting Through a Wireless LAN (Option)

A wireless network (Wireless LAN) environment is a network environment that enables communication between multiple computers at home or a small-size office through wireless LAN devices.

Using the wireless network connections between the systems, you can use normal network functions such as sharing of files, folders and printers. When a computer-to-computer network has been constructed, a computer that is not connected to the Internet can share the Internet by accessing another computer connected to the Internet. For details, see “To share an Internet connection” on page 45.

The description in this section refers to the Intel(R) PRO/Wireless 2200BG Network Connection (hereafter referred to as an 11g card) and the Intel(R) PRO/Wireless 2915ABG Network Connection (hereafter referred to as an 11a/g card) device.

To view the installed wireless LAN card, click Start > Control Panel > Performance and Maintenance > System > Hardware tab > Device Manager.

The actually displayed images may differ from the figures shown in this section according to the installed device and the connection state, and the supported cards may differ depending on the system model.

The connection configuration procedures will be described for a computer with Windows XP Service Pack 2. For procedures to configure a wireless network using the wireless LAN setup program supplied by the wireless LAN card manufacturer, See ”Wireless Network Setup Using the Wireless LAN Setup Program” on page 57.

To use the wireless network, you have to turn on the wireless LAN function by using the Wireless LAN On/Off Button. (p 14)

Wireless network connections can be classified into two categories.

**1) Access Point (AP)**

You can connect to an AP to use the network. This is possible only in an environment equipped with an AP. For details, see “Connecting to an Access Point (AP)” on page 49.

**What is an Access Point (AP)?**
An AP is a network device that bridges wired and wireless LANs, and corresponds to a wireless hub in a wired network. You can connect multiple wireless LAN installed computers to an AP.

**2) Computer-to-computer (ad hoc)**

This is also called a peer-to-peer network.

In computer-to-computer wireless networks, you can wirelessly connect 2 or more computers that have wireless LAN modules. For details, see “Connecting to computer-to-computer networks (peer-to-peer or ad hoc)” on page 51.

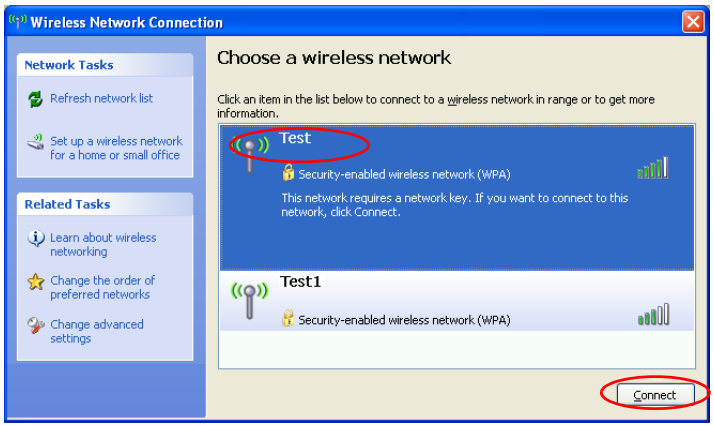
## Connecting to an Access Point (AP)

This section describes how to connect to an AP. You can use the network when you are connected to an AP.

For more detailed information such as the network key (encryption key), ask your network administrator.

1. Right-click on the **Wireless Network Connection** ( ) icon on the taskbar, and select **View Available Wireless Networks**.

2. Select an AP (E.g. Test) to connect to and click **Connect**.
   If there is a configured network key for the AP to connect to, the Enter Network Key window appears.
   Enter the **Network Key** in the window and then click the **Connect** button.

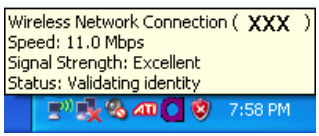

Wireless Network Connection
Network Tasks
Refresh network list
Set up a wireless network for a home or small office
Related Tasks
Learn about wireless networking
Change the order of preferred networks
Change advanced settings
Choose a wireless network
Click an item in the list below to connect to a wireless network in range or to get more information.
Test
Security-enabled wireless network (WPA)
This network requires a network key. If you want to connect to this network, click Connect.
Test1
Security-enabled wireless network (WPA)
Connect

When a network key is not defined for a selected AP, click on Link to display the warning message box. Then click Connect again in the box.

Now when **Connected** in AP is displayed, and you can access the network.

**Checking the connection status**

Move the mouse pointer over the Wireless Network Connection ( ) icon on the taskbar, and the connection status is displayed.



## Connecting to computer-to-computer networks (peer-to-peer or ad hoc)

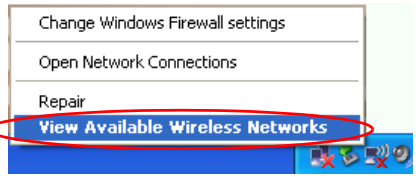
In computer-to-computer wireless networks, you can wirelessly connect 2 or more computers that have wireless LAN modules. Using this method, a computer that is not connected to the Internet can share the Internet by accessing another computer connected to the Internet. (Refer to See ”To share an Internet connection” on page 45.)

You can connect by completing the following steps:

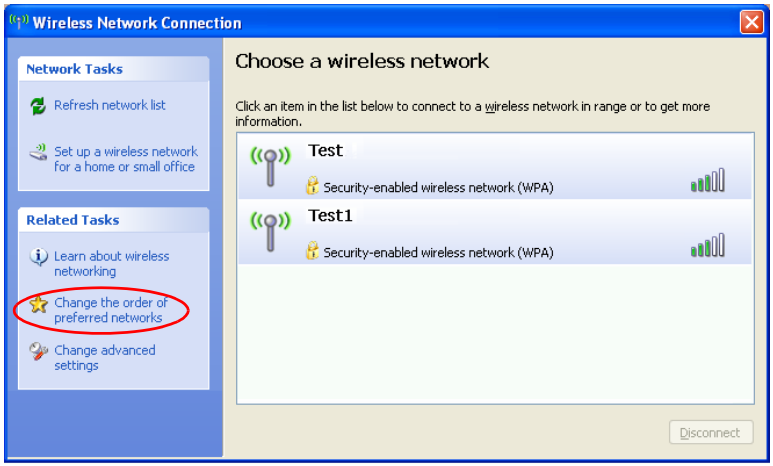
- Step 1. Set up a computer-to-computer network on a computer.
- Step 2. Connect to the configured computer from other computers.

### *Step 1. Setting up a computer-to-computer network*

1. Right-click on the **Wireless Network Connection** ( ) icon on the taskbar, and select **View Available Wireless Networks**.

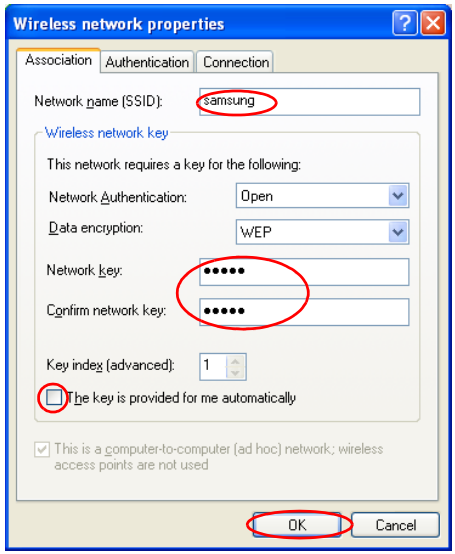


2. Click **Change the order of Preferred Networks**.


Wireless Network Connection
Network Tasks
Refresh network list
Set up a wireless network for a home or small office
Related Tasks
Learn about wireless networking
Change the order of preferred networks
Change advanced settings
Choose a wireless network
Click an item in the list below to connect to a wireless network in range or to get more information.
Test
Security-enabled wireless network (WPA)
Test1
Security-enabled wireless network (WPA)
Disconnect

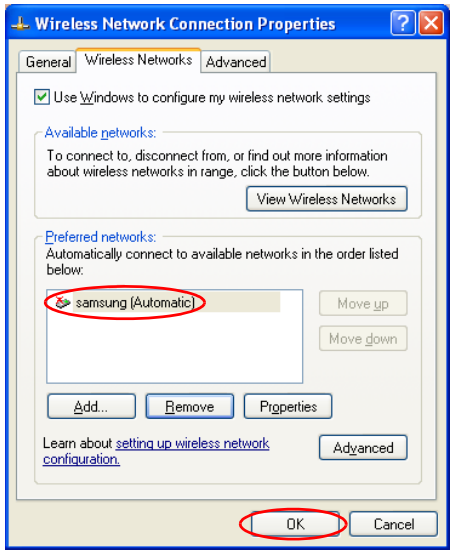
3. On the **Wireless Network** tab, click **Advanced**.
4. Clear 'Automatically connect to non-default network' check box, if it is selected. Select 'Computer-to-computer (ad hoc) networks only', and click **Close**.
5. In the **Wireless Networks** tab, click **Add**.

6. Enter the network name (e.g. samsung), and unselect 'The key is provided for me automatically'. Enter the encryption key in the Network key field, and click **OK**.



To prevent a network connection from an unauthorized user, it would be better to configure a network key (encryption key). A network key consists of 5 or 13 alphanumeric characters (e.g. magic), or of 10 or 26 hexadecimal numbers (a hexadecimal number is represented by numbers '0' to '9' or letters 'a' to 'f').

7. Check that the configured network name (e.g. samsung) is in the 'Preferred networks' item, and click **OK**.

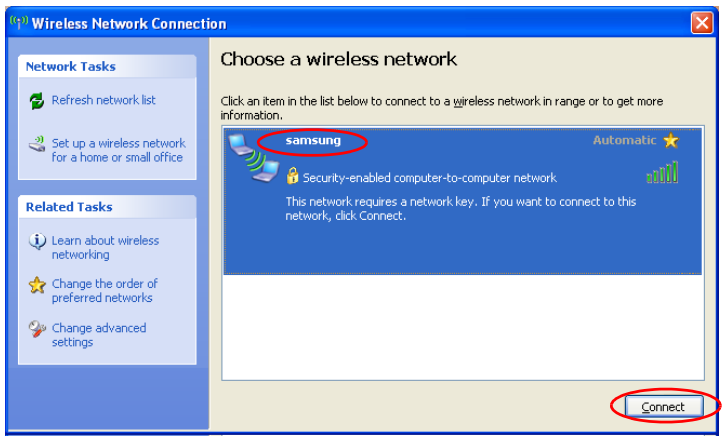



Now your wireless network setup has been completed.

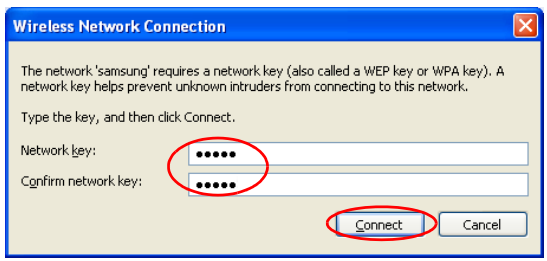
## *Step 2. Connecting to the configured computer*

1. Right-click on the **Wireless Network Connection** ( ) icon on the taskbar, and select **View Available Wireless Networks**.

2. Select the wireless network name (e.g. samsung) specified in ”Connecting to computer-to-computer networks (peer-to-peer or ad hoc)” on page 51, and click **Connect**.


Wireless Network Connection
Network Tasks
Refresh network list
Set up a wireless network for a home or small office
Related Tasks
Learn about wireless networking
Change the order of preferred networks
Change advanced settings
Choose a wireless network
Click an item in the list below to connect to a wireless network in range or to get more information.
samsung
Automatic
Security-enabled computer-to-computer network
This network requires a network key. If you want to connect to this network, click Connect.
Connect

3. Enter a cryptographic key in the network key box and click **Connect**.

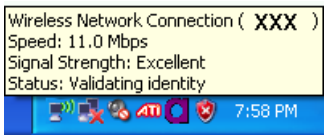

Wireless Network Connection
The network 'samsung' requires a network key (also called a WEP key or WPA key). A network key helps prevent unknown intruders from connecting to this network.
Type the key, and then click Connect.
Network key:
Confirm network key:
Connect
Cancel

If the network key is not configured in ”Connecting to computer-to-computer networks (peer-to-peer or ad hoc)” on page 51, just click **Connect**, without any keystrokes.

When connected to the wireless network, the system displays **Connected** in the selected network of the Network Connection window.

**Checking the connection status**

Move the mouse pointer over the Wireless Network Connection ( ) icon on the taskbar, and the connection status is displayed.



## Wireless Network Setup Using the Wireless LAN Setup Program

You can use a wireless LAN by using a wireless LAN configuration program (PROSet) provided separately.

To use wireless network connection, complete the following procedures.

- Step1. Install the wireless LAN configuration program (PROSet).
- Step2. Configure wireless network settings through the wireless LAN configuration program.

### *Step 1. Installing the wireless LAN configuration program (PROSet)*

You can install the wireless LAN client administrator program following the instruction displayed automatically when you insert the system software CD. Insert the system software CD into the CD-ROM drive, and install the wireless LAN configuration program.

### *Step 2. Using the wireless LAN configuration program (PROSet)*

Double-click the **wireless LAN program** ( ) icon on the taskbar.
(Or, click **Start > All Programs > Intel PROSet Wireless > Intel PROSet Wireless**.)

In some languages, some buttons on the window may not be displayed. If this is the case, resize the window to use the program.

Configure wireless network settings in PROSet following the procedures below.

**To connect to an Access Point:**

To connect to an access point or existing computer-to-computer (Ad Hoc) network, refer to the following procedures. (To create a new computer-to-computer network, refer to the following "To create computer-to-computer (Ad Hoc) network" section.)

1. In Available Networks, click on **Refresh**.
2. Select the name of desired access point or computer-to-computer network to connect from the searched available networks list, and click **Configure**.

If your desired network does not appear, click **Refresh**.

An access point is represented by the ( ) icon, and a computer-to-computer network is represented by the (  ) icon. An ( ) icon is displayed in front of an access point or a computer-to-computer network with configured security settings.

3. Enter **Profile Name** and click **Next**.
4. In the Search Security Settings window, the wireless network security search message will appear. Click **Next**.
5. Enter the **network authentication**, **data encryption (WEP)**, **encryption level, key index**, and **wireless security password** configured for the target access point or computer-to-computer network in the Security Settings window, and click **Next**.

The network authentication, data encryption (WEP), key index, and password of a access point are configured in the access point management program. For information on the security information, check the security settings of the access point or ask your wireless network administrator.

To connect to an existing computer-to-computer (Ad Hoc) network, enter the password configured when creating the computer-to-computer network for the first time. You do not need to enter network authentication or key index.

**Security Settings**

- **Network authentication**: The network authentication option includes Open System and Shared Key. When you select Open System, no authentication is

applied (however, encryption is supported). When you select Shared Key, a WEP key is used for authentication. The default setting is Open System.

- **Data encryption (WEP)**: The IEEE 802.11 WEP (Wired Equivalent Privacy) standard defines two levels of encryption, a 64-bit key (this is sometimes represented by 40bits) and a 128-bit key.

- **Key index**: Select the current encryption key index used by the access point out of 1 to 4.

- **To use encryption key**: Click **Use pass phrase** to activate, and enter 5 (for 64-bit) or 13 (for 128-bit) alphanumeric characters (represented by 0-9, a-z, or A-Z).

**6.** The Done window appears, click **OK**.

When a wireless connection to an access point is established, the connection icon ( ) appears in front of the name of the connected profile.

**To create a computer-to-computer (Ad Hoc) network:**

To create a new computer-to-computer (Ad Hoc) network or to connect to a hidden access point (Stealth/Closed Mode), refer to the following procedures.

A hidden access point is an access point that exists, but is configured not to be detected by the scan operation to prevent access attempts from unauthorized users.

**1.** In Profiles, click on **Add**.

**2.** Enter **Profile Name** and **Network name (SSID)**, select **Operating Mode**, then click **Next**.

**What is a network name (SSID)?**
Network name (SSID) is a name that a wireless adapter uses for identifying connection. Enter the name of computer-to-computer network to create (e.g., samsung) or the name of access point to connect. The network name identifies cases. (capital and lowercase) For the name of access point, check the settings of the access point, or ask your wireless network administrator.

**Operating Mode:**
– **Network (Infrastructure) - Connect to an Access Point** : Select to connect to an access point.

– **Device to device (Ad hoc) - Connect directly to other computers** : Select to create a computer-to-computer (Ad Hoc) network.

3. Configure password setting to be used for computer-to-computer network connection in the Security Settings window.
   To connect to an access point, enter the **network authentication**, **data encryption (WEP)**, **encryption level, key index**, and **wireless security password** configured in the access point.

It is recommended to configure data encryption for security purposes when creating a computer-to-computer network connection profile. For more information on security settings refer to the security settings in Connecting to AP or Help.

When you are creating a computer-to-computer network connection profile, the network authentication setting is disabled.

4. When a profile creation is completed, the new created profile appears in the profiles list. Select corresponding profile, and click **Connect** to connect to the created profile.

   When a wireless connection to the created profile is established, the connection icon ( ) appears in front of the name of the connected profile.

# Using Network Services

While the computer is connected to the network, you can use network services to share files, folders, and printers.

Network services are provided for the computers that are connected to the network through wired or wireless network connections. For details, see “Connecting Through a Wired LAN” on page 41 and see “Connecting Through a Wireless LAN (Option)” on page 48.

## Sharing files or folders

This section describes how to share files and folders between computers connected to the network.

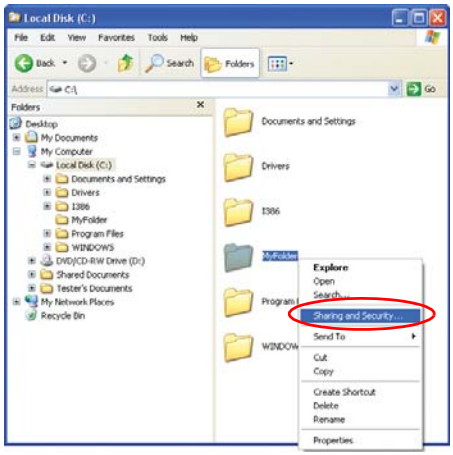
To share files, complete the following procedures:

- Step 1. Configuring the sharing of files and folders on a computer.
- Step 2. Accessing shared files and folders from another computer.

When a file or folder is shared, anyone connected to the network can open and delete the shared file or folder.
Configure a file sharing network only when the network is secure, and do not share important data.

### *Step 1. Configuring Sharing*

1. Right-click the target file or folder to share in My Computer, and select **Sharing and Security**.




2. Click 'IF you understand the security risks but want to share files without running the wizard, click here'.

It has the same security effect as that of the 'Network Setup Wizard'. This screen does not appear if Internet Sharing Network Wizard has been installed in the computer-to-computer wireless network environment.

3. Select 'Just enable file sharing', and click **OK**.
4. In the 'Network sharing and security' field, select 'Share this folder on the network', enter the share name, and click **OK**.

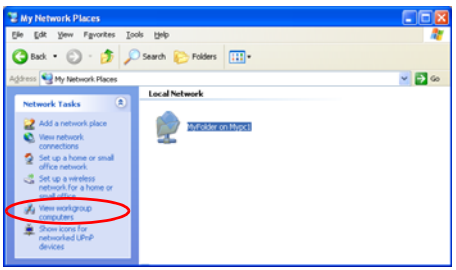
Be cautious when selecting 'Allow network users to change my files' since other network users can change the files in the shared folder.

The file and folder sharing configuration has been completed.

### *Step 2. Using Shared Files or Folders*

This section describes how to access shared files or folders if your computer is a member of the same workgroup.

1. Double-Click **My Network Places** of desktop under Other Places.
2. Click '**View workgroup computers**', and click the desired computer to access the shared file.


My Network Places
File Edit View Favorites Tools Help
Back Search Folders
Address My Network Places
Go
Network Tasks
Add a network place
View network connections
Set up a home or small office network
Set up a wireless network for a home or small office
View workgroup computers
Show icons for networked UPnP devices
Local Network
MyFolder on Mypc1

**If your computer is a member of another workgroup:**

1. Click Other Places > Microsoft Windows Network.
2. Click the desired workgroup.
3. Click the desired computer to display the shared files or folders.

## Sharing Printers

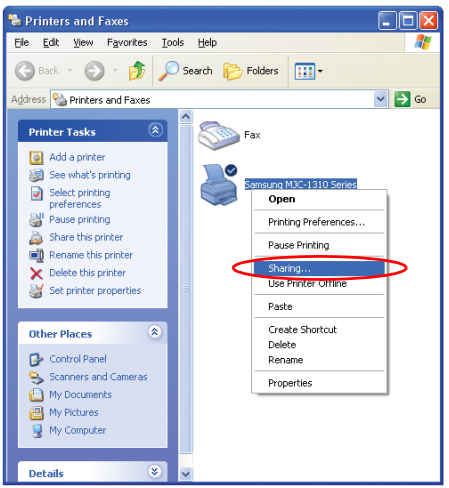
This section describes how to share a printer between computers connected to a network.

To share a printer, complete the following procedures:

- Step 1. Configure printer sharing in the computer connected to the printer.
- Step 2. Add and use the shared printer in other computers on the network.

### *Step 1. Configuring Printer Sharing*

1. From the computer connected to the printer, click **Start > Printers and Faxes**.
2. Right-click the printer you want to share, and click **Sharing**.

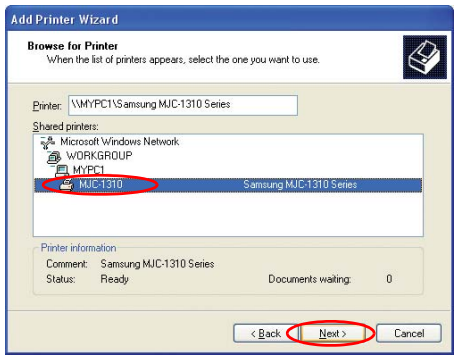



3. Select 'Share this printer', enter a share name for the shared printer, and click **OK**.
4. In the Printers and Faxes window, you will find the printer icon has been changed to another icon on a hand.

### *Step 2. Adding and Using a Shared Printer.*

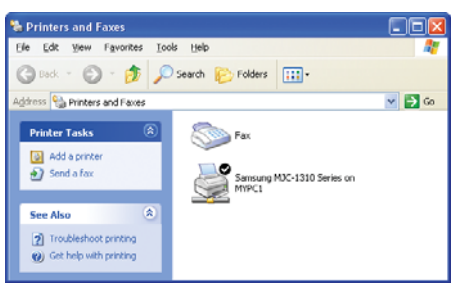
1. From a different computer that wants to use the shared printer, click **Start > Printers and Faxes**.
2. Click **Add a printer**.
3. In the Add Printer Wizard, click **Next**.
4. Select 'A network printer, or a printer attached to another computer', and click **Next**.

5. Select 'Browse for a printer', and click **Next**.
6. Select the workgroup or computer, select the desired printer, and click **Next**.




If you cannot find the desired printer, try again after a while.

7. Read the warning about a shared printer, and click **Yes** to install the shared printer.
8. Select **Yes** for 'Do you want to use this printer as a default printer?', and click **Next**.
9. Click **Finish**.
10. When the printer sharing configuration has been completed, the shared printer appears in the Printers and Faxes window.




Now you can print using the shared printer even if your computer is not directly connected to a printer.

# Using Bluetooth Devices (Optional)

You can transfer files between Bluetooth devices, use the Internet, and construct a Personal Area Network. In addition, you can use a wireless keyboard, wireless mouse, and a wireless printer that have the Bluetooth function.

You can only use the Bluetooth communication function between devices (computers, mobile phones, PDAs, printers, etc.) which support Bluetooth.

The Bluetooth function is provided through the Bluetooth software included in Microsoft Windows XP SP2.

**Bluetooth Device Help**

For more detailed procedures on using the Bluetooth function, click **Start > Help and Support > Network and the Web > Networking > Wireless networking > Bluetooth devices**, and view the descriptions.

## The following functions are provided by the Bluetooth software.

- **Transferring files**

  You can transfer files between Bluetooth devices such as computers, mobile phones, PDAs (Personal Digital Assistant), etc.

  For more detailed procedures on transferring files, refer to "**Send and Receive files to/from a Bluetooth device**" of the Bluetooth On-line help.

- **Using the Internet via a mobile phone**

  You can connect to the Internet through your mobile phone after connecting it to a computer which is connected to the Internet.

  For more detailed procedures on using the Internet, refer to "**Install a Bluetooth mobile phone**" and "**Create a Bluetooth connection to the Internet using a Bluetooth mobile phone**" of the Bluetooth On-line help.

- **Using a wireless keyboard and mouse**

  You can use a wireless keyboard and mouse which have the Bluetooth function.

  For more detailed procedures on using a wireless keyboard and mouse, refer to "**Install a Bluetooth keyboard**" and "**Install a Bluetooth mouse**" of the Bluetooth On-line help.

- **Using a wireless printer**

  You can use a wireless printer if the printer supports Bluetooth HCRP (Hardcopy Cable Replacement Profile).

  For more detailed procedures on using a wireless printer, refer to “Install a Bluetooth printer” of the Bluetooth On-line help.

- **Using a Personal Area Network**

  You can exchange files between computers by connecting to the shared folder of another computer via a Personal Area Network.

  For more detailed procedures on using the Personal Area Network, refer to “Join a personal area network”, “Provide a name for your computer on a personal area network” and “Bluetooth personal area networking overview” of the Bluetooth On-line help.

- **Sharing data with a Palm Hand-held PC or a Pocket PC**

  You can transfer data to and from a Palm Hand-held PC or Pocket PC.

  For more detailed procedures on sharing data, refer to “Installing a Palm handheld computer using Bluetooth technology” and “Installing a Pocket PC using Bluetooth technology” of the Bluetooth On-line help.

## Precautions

- Please do not send files larger than 60MB when transferring files through a File Transfer Function or Personal Area Network. Sending a file larger than 60MB may fail due to an unstable Bluetooth connection.
- When using the Personal Area Network function, other computers may not appear in My Network Places. If you cannot see other computers after 5 minutes, click “Start > Search > Computers or people” and enter the name of a computer and search for it.
  For procedures to view the name of your computer, refer to “Provide a name for your computer on a personal area network” of the Bluetooth On-line help.

# Infrared Communication

Your computer may have infrared port. Using the infrared port, you can transfer data to computer, printer, camera and other devices through infrared communication.

**Restrictions in Use**
For infrared communication, the devices should have infrared communication capability, and should be located within 1 m of each other. In addition, there should be no obstacle between the infrared ports of the target devices.

## To establish infrared connection

The procedures to communicate with another computer through infrared port are described below.

1. Locate the target computers so that the infrared ports face each other.
2. When infrared communication is available, a beep sounds and **Send files to another computer** icon ( ) appears on the desktop.

You can now transfer data through infrared communication.

## To transmit data through infrared communication

The procedures to transmit files to another computer are described below.

1. Connect the target computers through infrared communication.
2. Drag a file over the **Send files to another computer** icon( ) in one of the computer.
3. [Wireless Link] dialog box appears on the other computer screen. Click **Yes**.
4. When the file transmission is completed, click **Close** to close the [Receiving Files] dialog box.

**To change infrared communication configuration**
To change the folder to save the received files, or to receive images from a digital camera, click **Start > Control Panel > Printers and Other Hardware > Wireless Link** and change the configuration.

**If you cannot use infrared communication**

1. Check BIOS setup.

a. Start the computer, and press **<F2>** to enter System Setup.
b. Select **I/O Device Configuration** in the **Advanced** menu, and press **<Enter>**.
c. Select **Infrared Port**, and set the item to **Enabled** by pressing **<F5>** or **<F6>**.
d. Save the configuration, and exit the Setup.

2. Check Windows configuration.

a. Click **Start > Control Panel > Performance and Management > System > Hardware** tab **> Device Manager**.
b. Double-click the “Infrared device”, and then double-click “IrDA Fast Infrared Port” item.
c. On the **Advanced** tab, select “Infrared Transceiver A” in the Properties field, then select “HP HSDL-2300/3600” in the Value field.
d. Click **OK**.

# Customizing Your Computer

## Using System Setup

The System Setup (BIOS) program enables you to configure your computer hardware and set security and power-savings options. The settings you choose are stored in battery-maintained CMOS memory that saves the information even when the computer's power is turned off. When your computer is turned back on, it is configured with the values found in this memory.

Run System Setup if you get a message prompting you to run the program. You may also want to run System Setup, particularly the first time you use your computer, to set the time and date, use security or power-management features, or alter the settings of other features.

**BIOS Caution:**
If you are not familiar with BIOS setup and what the parameters mean, seek help from a person who is knowledgeable. Incorrect settings may cause your system to malfunction or "Crash".

Your computer's version of System Setup may not include all the fields listed here or may include additional fields. Field names and order of appearance can vary according to the version of the BIOS (basic input/output system) on your computer.

## Starting System Setup

To start System Setup, turn on your computer and then press **<F2>** and hold until the System Setup screen appears.

*Table 2. System Setup Menus*

| Menu | Function |
|---|---|
| **Main** | Changes the basic system. |
| **Advanced** | Configures advanced features on your computer. |
| **Security** | Enables security features, including passwords. |
| **Boot** | Specifies the order of boot devices and configures boot features. |
| **Exit** | Specifies how to exit System Setup. |

To open the menu you need to use, use the left or right arrow keys to select the menu name.

*Table 3. System Setup Navigation Keys*

| Navigation Key | Function |
|---|---|
| **<F1>** | Displays the General Help window. |
| **<Esc>** | Exits the current menu. |
| **< ↑ > or < ↓ >** | Moves the cursor up and down between fields. |
| **< ← > or < → >** | Selects different menus. Pressing the <**Esc>**key at the Main menu brings you to the Exit menu. |
| **<F5>** | Scrolls backwards through the options for the highlighted field. |
| **<F6>** | Scrolls forward through the options for the highlighted field. |
| **<F9>** | Sets the parameters for the current menu to their default values. |
| **<F10>** | Save changes and exit system setup. |
| **<Enter>** | Executes commands or opens a submenu. |

## Changing Booting Priority

You can select the booting priority among the devices such as the hard drive, CD-ROM drive, etc. The following example describes how to configure the hard drive as the first booting device when the CD-ROM drive is configured as the first booting device by default.

1. Select the **Boot** menu in System Setup.
2. Press **<Enter>** on **Boot Device Priority** item.
3. Use < ↓ > key to move to the **Hard Drive** item, and press **<F6>** until it is at the very top.
4. Press **<F10>** to save the changed configuration, and exit System Setup.
   Now you can boot the system with the hard disk drive as the first booting device.

# Configuring the Password

## Setting the Supervisor Password

By configuring a supervisor password, you can restrict system access to authorized users only.

Do not lose or forget your password. If you have forgotten your password, contact the Samsung service center.

1. Select the Security menu in the System Setup. To enter System Setup, see “Starting System Setup” on page 71.
2. On the **Set Supervisor Password** item, press **<Enter>**.
3. Enter a password, press **<Enter>**, re-enter the password for confirmation, and press **<Enter>** again.
4. When a message confirming the password configuration appears in the [Setup Notice] window, press **<Enter>**.

## Setting the User Password

You can configure user passwords so that other users can use the system.

Before configuring a user password, a supervisor password must have been configured.
Users can start the system with their user password, but cannot enter into the System Setup.
Deactivating the supervisor password also deactivates the user password.

On the **Set User Password** item, press **<Enter>**, and complete step 3-4 of "Setting the Supervisor Password".

## Activating the Booting Password

Before activating the booting password, the supervisor password must have been configured.

Set the **Password on boot** option to [Enabled].

From now on, system booting will not proceed without the password.

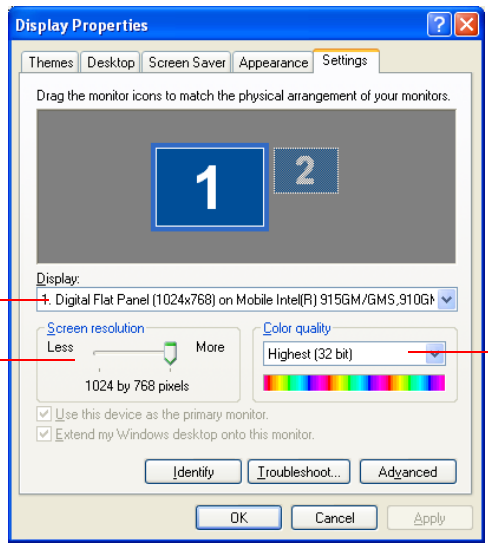
## Deactivating the Password

1. On the password to delete, press **<Enter>**. (e.g. supervisor password)
2. Enter the current configured password, and press **<Enter>**.
3. Leave the 'Enter New Password' and 'Confirm New Password' field empty, and press **<Enter>** to deactivate the password.

# Configuring Resolution and Color Depth

Screen resolution is the number of pixels displayed on the screen. High resolution makes the overall screen area large, although individual items appear small. Color quality is determined by the number of bits used to represent a pixel on the screen. High color quality displays more number of colours on your screen.

1. Select **Start > Control Panel > Appearance and Themes > Change the screen resolution**.
2. Make changes on the **Settings** tab of the [Display Properties] dialog box.




You can view the graphics chipset.

To change your screen resolution, move the slider to select an appropriate resolution.

To change the number of colors displayed on a monitor, select an appropriate colour quality.

**The Graphics Chipset**

- For **P40 model**, either an ATI or Intel Graphics Chipset is installed. You can view the installed graphics chipset in the Display Properties window.

**. ATI Graphics Chipset** : ATI MOBILITY RADEON X300/X600 Chipset or ATI MOBILITY RADEON Graphic Chipset

**. Intel Graphics Chipset** : Mobile Intel(R) 915GM Express Chipset

3. When you have completed configuration, click **Apply**.

For XGA models, configuring the screen resolution to 1024x768, and the colour quality to Highest (32 bit) is recommended.

For SXGA+ models, configuring the screen resolution to 1400x1050, and the colour quality to Highest (32 bit) is recommended.

# Using External Display Devices(ATI Chipset model,  (p 75))

Using external display devices such as monitors, projectors, TVs, etc allows you to view screen images alternatively or simultaneously on each device. Additionally, you can extend the screen onto two display devices to use a larger workspace. Using external display devices is especially useful when you are giving a presentation or watching a movie through your TV.

## Switching Display Devices Using the Shortcut Key

You can watch the screen through either the LCD or an external display device, or you can even watch the screen through both the LCD and an external display device simultaneously.

**1.** Connect the external display device (e.g. a monitor or a projector) to the corresponding port of the system. To connect a TV, connect the TV to the TV output port of the system.

**Connecting to a TV**

To connect to a TV, connect the TV-Out port of the system and the S-Video port of the TV with the S-Video cable. (The cable is not included and needs to be purchased additionally.)

**Connect to a DTV**

To connect to a DTV, connect the TV-Out port of the system and the Component port of the TV output using the Dongle cable and the Component cable (the Dongle cable is not included and needs to be purchased additionally).

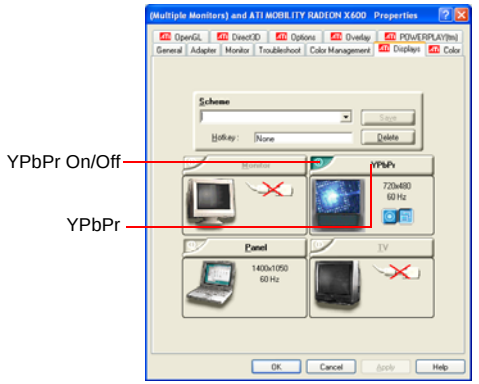
Connect the Dongle cable to the TV-Out port of the system and the Component cable.

**Dongle cable** - The Dongle cable is not included and needs to be purchased additionally.

For ATI chipset models, you have to change the configuration as follows after connecting the cable.

1. Click **Start > Control Panel > Appearance and Themes > Display**

2. Click the **Settings** tab **> Advanced**
3. Click the **Display** tab.
4. Select **YPbPr On/Off**.




5. Click **Apply**.
6. Click **YPbPr**.
7. Select the appropriate TV type in the YPbPr Properties window and Click **Apply.**

**2.** Press the **<Fn>+<F4/** |▢> keys. Provided that an external display device is connected, the display option changes in LCD > CRT > LCD+CRT order whenever the **<Fn>+<F4/** |▢> keys are pressed.

Provided that multiple external display devices are connected, the display order is LCD > CRT > TV > LCD+CRT > LCD+TV > LCD whenever the **<Fn>+<F4 /** |▢**>** keys are pressed.

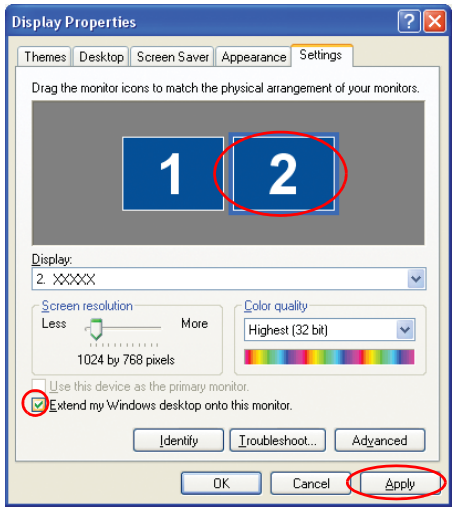
In the DOS environment, the screen is output to LCD and CRT in this sequence. The TV function is not supported. In full screen DOS mode of Windows, you cannot use the hot keys.

## Using Dual View to View Extended Screen

You can expand the screen into two display devices and work conveniently in separate workspaces.

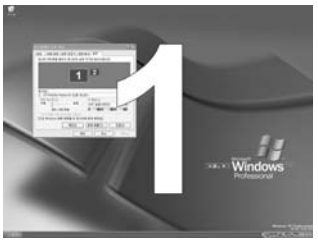
In Dual View mode, you can select the screen resolution and colour quality for each display device, as if there were two separate graphics cards.

1. Connect the external display device (e.g. a monitor or a projector) to the corresponding port of the system. To connect a TV, connect the TV to the TV output port of the system.(”Connecting to a TV” (p77))
2. Press touchpad right button on the desktop, click **Properties**, and then click the **Settings** tab.
3. Click the monitor '**2**' icon, select the 'Extend my Windows desktop onto this monitor' check box, and then click **Apply**.




4. When the configuration is complete, click **Identify** on the left side of Troubleshoot. The primary display device(the LCD) is indicated as '**1**', and the

secondary display device is indicated as '**2**'. Now you can view the screen through two monitors.




1 : Primary

2 : Secondary

When you use Dual View, configuring the LCD as the 'Primary' monitor is recommended.

If the screen of the secondary display device is displayed at 640x480 pixels, with 256 colours, change the settings to the desired screen resolution and colour quality in the [Display Properties] dialog box.

## Deactivating Dual View Mode

Click the monitor '**2**' icon, clear the 'Extend my Windows desktop onto this monitor' check box, and then click **Apply**.

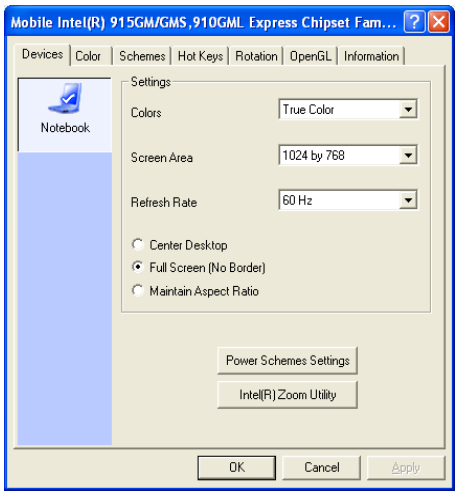
**To move a window between display devices in Dual View mode**
Click the title bar of the window in the primary display device (1, the LCD), and drag it to the secondary display device (2). The window is moved to the secondary display device.

# Using External Display Devices(Intel Chipset mode,  (p 75))

Using external display devices such as monitor or projector, you can view the screen images alternatively or simultaneously. You can extend the screen into two display devices to use larger workspace.

Using external display devices would be especially useful when you are giving presentations or watching a video file.

1. Connect the external display device (e.g. a monitor or a projector) to the corresponding port of the system. To connect a TV, connect the TV to the TV output port of the system.(”Connecting to a TV” (p77))
2. Right-click on the desktop, and select **Graphics Options > Graphics Properties**.
3. On the **Devices** tab, select your desired display device, and click **OK**. (The displayed device list is determined by the currently connected devices.)




| | |
|---|---|
| **Monitor** | Displays on an external device such as monitor or a projector. |
| **TV** | You can only view the screen on the TV. |
| **Notebook** | Displays on the notebook LCD only. |
| **Intel(R) Dual Display Clone** | Displays the same screen on the notebook LCD, and an external device such as monitor or projector. |
| **Extended Desktop** | Extends the screen into the notebook LCD and an external device such as monitor or projector to use a 2 times larger workerspace. |

**To switch display devices using shortcut key**

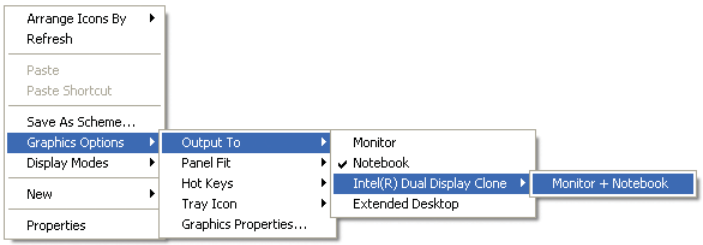
You can switch display devices easily by pressing <Fn>+<F4/⧉|▢> shortcut key.

Provided that multiple external display devices are connected, the display order is LCD > CRT > TV > LCD+CRT > LCD+TV > LCD whenever the **<Fn>+<F4 /** ⧉|▢**>** keys are pressed.

You cannot use the <Fn>+<F4/⧉|▢> shortcut key in the full screen mode DOS prompt.

**To change display devices easily**

Right-click on the desktop, and select Graphics Options > Output To to change the current display device easily.




**To change the screen resolution and color quality**

If the screen does not appear clearly, please try to change the screen resolution and colour quality. In the figure of step 3, select a device, and configure the color, screen area, and refresh rate.

When using an LCD and a wide monitor, the LCD and monitor screen sizes may differ. To make them the same size, select ‘Apply the same settings to the 2 monitors’.

# System Management

## Using Power Management Options

Your computer includes **Power Management** options that can help the battery charge last longer and extend the life of the battery. Power-management options will slow down or shut off system components when the components are not being used.

Power management may slow down system performance. Your computer runs fastest with the power cord attached, whereby power management is disabled.

In the next sections, basic and advanced methods of power management will be discussed.

### Basic Power Management Schemes

This section discusses the basic schemes of power management when the computer is operating on battery power or using AC power.

**Standby vs. Hibernation**
Hibernation is a state where the contents of memory are stored in a special file on the hard disk, and Standby simply keeps a small holding current through the memory to keep the data. You are more likely to sustain loss of data in Standby mode so it is recommended to save all open files before entering Standby.

**Changing Devices:**
Do not change PC Cards while in standby or hibernate modes.

**To enter the power management window complete the following:**

1. Click **Start** > **Control Panel** > **Performance and Maintenance**.
2. Click icon to display the **Power Options Properties** window.

3. Click the **Power Schemes** tab to display the basic power management options.

By default, the power scheme is configured to SAMSUNG mode. SAMSUNG mode extends the battery life and optimizes the Intel Speedstep function. Since the CPU power consumption is automatically optimized to conserve power when the computer is operating on battery power, an application may be executed slower than when it is operating on AC power.To use SAMSUNG mode after reinstalling Windows, install the PowerCFG program using the system software CD.

4. Select the time that you wish each of the following actions to occur in **Battery** and **AC power** mode.
   - Turn off monitor
   - Turn off hard disks
   - System standby
   - System hibernates

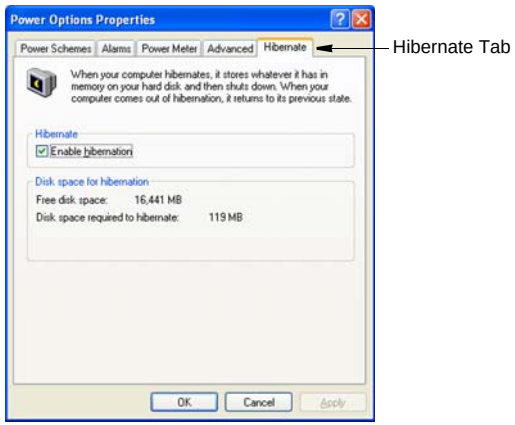
Turning off the monitor and HDDs will save a substantial amount of battery power, therefore when in battery only mode select the shortest time practical.

You can schedule your system for shutdown, hibernation or standby modes by clicking System > Computer Scheduling of the EasyBox program (p32).

**Hibernate Mode** (*Power Management or Manual Method*)

When hibernation is used, your computer turns off and when you power up again, everything is restored exactly as you left it—including programs and documents you may not have saved or closed. Everything in memory gets saved to the HDD, and the monitor and hard disk get turned off.

**If You Reinstall Windows:**
You should re-establish hibernate in power options by opening **Power Options Properties** window and click on the **Hibernate** tab then click "Enable Hibernation".


Power Options Properties
Power Schemes
Alarms
Power Meter
Advanced
Hibernate
Hibernate Tab
When your computer hibernates, it stores whatever it has in memory on your hard disk and then shuts down. When your computer comes out of hibernation, it returns to its previous state.
Hibernate
Enable hibernation
Disk space for hibernation
Free disk space: 16,441 MB
Disk space required to hibernate: 119 MB
OK
Cancel
Apply

**Frequent Interruptions:**
If you experience frequent interruptions, you might also consider putting your computer into automatic hibernation after a specified number of minutes using the power management options.

**Standby Mode** (*Power Management or Manual Method*)

Standby is used mainly for conserving battery power in your notebook computer. It also gives you the benefit of getting right back to your work without waiting for the computer to restart. Standby turns off your monitor and hard disks, placing your entire system in a low-power state. When you return to your computer, restores your desktop exactly as you left it. It is recommended that you do not enter standby mode with less than 20% battery power.

**5.** Click **OK** to set your power management options and close the window.

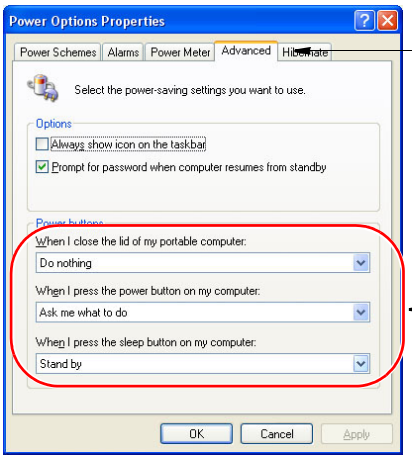
**Rest Key:**
The manual **<Fn+**Esc/ **>** key combination will not activate Standby or Hibernate modes while you are playing a multimedia program or have an active USB device connected.

## Advanced Power Management Schemes

This section discusses the advanced power management schemes. There are two buttons that you can use to manually conserve power.

**To enter the power management window complete the following:**

1. Click **Start** > **Control Panel** > **Performance and Maintenance**.
2. Click icon to display the **Power Options Properties** window.
3. Click the **Advanced** tab to display the advanced power management options.




4. Select the mode (**Do nothing/Ask me what to do/Standby/Hibernate/Shut down**) assigned to the Power button and/or Rest <Esc/ > key. Also select the action (**Do nothing/Standby/Hibernate**) associated with closing the computer lid.

The “Rest” key is assigned to the <Fn+Esc/ > key combination. See ”Basic Power Management Schemes” on page 83 for a better understanding of Standby and Hibernate modes.

5. Click **OK** to set your power management options and close the window.

You can return to normal operation after you have used one of the “Power Management” buttons by quickly pushing and releasing the **Power** button.

# Using the Battery

Please refer to the following instructions when running the computer on battery power without connecting the AC power.

Please read the instructions on the battery before use.

Please refer to the system operation environment (p131) of this manual and operate and store the battery at room temperature.

## Ejecting and Attaching Battery

1. Shutdown the system and close LCD.
2. Put the computer upside down on a flat surface.
3. While holding the battery latch to the Unlock position( ), remove the battery.

4. To attach the battery, place the battery into the system. Check that the battery latch is in the Lock position( ).

## Monitoring the Battery Charge

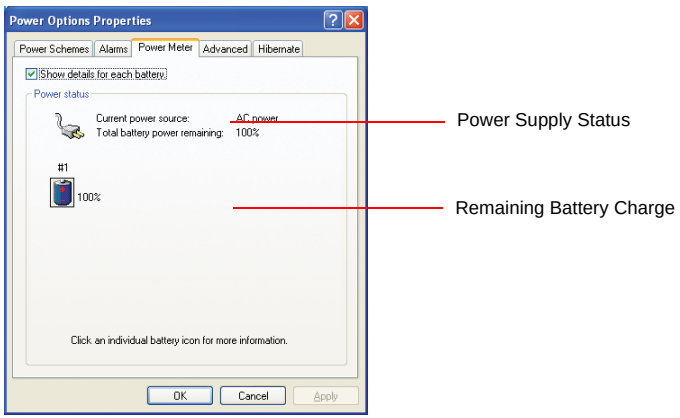
You can view the battery charge status by completing the following procedures.

### *To use the shortcut key to view*

Press the <Fn>+<F2/ > key combination on the keyboard and then the current power source and the current remaining battery charge are displayed at the top left of the screen.

### *To view through the Control Panel*

Select **Start** > **Control Panel** > **Performance and Maintenance** > **Power Option** > **Power Measure** tab.Then you can view the current power source and the current remaining battery charge.




**Using the battery**
Battery is an expendable supply, so when you use it for a long time, the capacity/battery life is shortened. If the battery life is reduced to under half of the initial time, we recommend that you purchase a new battery to use.

**Battery Warning**
You will hear an alarm when the remaining battery charge is under 10%. Connect the power cable or turn off the computer and install a fully charged battery.

When the remaining battery charge is under 3%, the computer automatically saves current work and turns off. This may be different according to the settings in **Control Panel > Performance and Maintenance > Power Options > Alarms** tab.

**When turning on the When turning on the system when the remaining battery level is below 5%**

turned on the system

The system will shut down during the start up process to prevent any loss of data. Connect the AC adapter, and then turn the system on.

## Using the Battery Manager

Using the Battery Manager program, you can change the configuration of the LCD brightness, the sleep timer and system devices, and can extend the battery usage time to maximum.

Click on **Start > All Programs > Samsung > Samsung Battery Manager > Samsung Battery Manager.**

- **Maximum Battery Saving Mode** : This mode extends the battery usage time to maximum. This may degrade the performance of the system.
- **Normal Mode** : This mode extends the battery usage time to normal.
- **Maximum Performance Mode** : This mode provides maximum system performance at the cost of the battery. Therefore, the battery usage time may be reduced in this mode.

- **Custom Mode** : In this mode, a user can configure a detailed configuration to save the battery usage time. A user can adjust the LCD brightness, select the time before the system sleeps, select the screen color quality and select the graphics mode. A user can also turn the wireless LAN function on and off.

The Screen Color Quality, Graphics Mode and Wireless LAN in the Detailed Configuration represent the current configuration. Selecting the Set button applies the configuration even without pressing the 'OK' or 'Apply' button.

**Controlling the LCD Brightness**

If you restart the system after changing the LCD Brightness in Custom Mode, the LCD brightness is changed to its default value. To keep the brightness value configured in Custom Mode, configure the [Brightness Control Mode] item to 'User Control' in the [Boot] menu of the System Setup. (See P. 6-2.)

If it is configured to [Auto], the LCD brightness is changed to level 8 when the power is supplied by the AC adapter, or to level 1 when the power is supplied by the battery according to the default brightness values.

**Power Saving Effect**

This shows the battery usage time after changing the system configuration in 10 levels for Maximum Battery Saving Mode and in 5 levels for Maximum Performance Mode.

**When Running a Game or Multimedia Application**

A game or multimedia application may not work smoothly in Maximum Battery Saving Mode. It is recommended selecting at least Normal Mode in this case.

## Battery Calibration

Calibrating your battery once a month is one of the recommended methods of increasing your computer's battery life. To calibrate the battery complete the following steps:

**Calibration Notes:**
You should start the battery calibration process with a fully charged battery, battery status LED is green. The power meter may not show 100%.

Before you commence the battery calibration process you should fully charge, then fully discharge and finally fully recharge the battery again.

1. Disconnect the AC power adapter after turning off the system.
2. Restart your computer and press **<F2>** to enter BIOS setup.
3. Using the arrow keys, highlight **Smart Battery Calibration** in the **Boot** menu.
4. Press **<Enter>** to start calibration process. The calibration usually takes 3 to 5 hours depending on the current battery charge.
5. When the calibration process is complete, recharge the battery fully.

# Upgrading Memory

This computer has one or more 128 MB or 256 MB memory module(s). Two memory module sockets are provided so that you can replace memory or install an additional memory module.

## Removing the memory module

Before removing/replacing the memory module, turn the system off completely. Do not replace the memory module when the system is in Standby/Hibernate mode.

1. Using a screwdriver, open the memory module compartment cover on the bottom of the computer.

2. Push the memory module tabs outward to pop the memory module upwards. Carefully pull the module out at an angle of about 30°.

## Adding a memory module

1. Align the new memory module connectors accordingly and slide it into the slot at a 30° angle.

Ensure the notch on the memory module corresponds with the notch on the socket.

2. Push the memory module in until the module clicks into place. If the memory module is not fixed completely, gently push the memory down while pressing the memory module tabs outward.

3. Close and fix the memory module compartment cover using a screwdriver.

## Using the Security Lock Port

The security lock is a device used to physically 'fix' the system when using it in a public place. The locking device needs to be purchased separately. The shape and methods of use may differ depending on the manufacturer. Please refer to the manual provided with the security lock for proper use.

1. Connect a security lock cable to a fixed object.
2. While holding the security lock port lever to the left, connect the cable to the security lock port.

Any damage to the machine caused by using a locking / security device is not covered under warranty.

## Tips for Using Your Computer

The following information helps you avoid potential problems as you use your computer:

Do not try to disassemble your computer. Opening the system chassis voids your warranty. Only an authorised manufacturer service center can replace or add any parts inside the chassis.

- Follow all the instructions and cautions in your computer user documentation.
- The LCD has a polarized surface and can be damaged easily. To prevent damage, avoid touching the screen.
- Use only approved AC adapters, auto adapters, memory modules and other options.
- Because a notebook computer is small and has restricted air flow around components, it is more likely to overheat than a desktop computer. A fan inside your computer runs when needed to help eliminate heat. Make sure the fan vent on the left side of your computer is not blocked when you use the computer. Occasionally check the vents and remove any accumulated dust on the outside.
- Avoid using or storing the computer in extremely hot or cold areas, such as a car on a hot day. Keep the computer away from heaters and out of direct sunlight. Exposure to excessive heat may damage computer components. If you have left your computer in a hot place, let it cool down slowly to room temperature (with the LCD panel open) before using it.
- Do not remove the memory-module compartment door, or try to install a memory module when the computer is on.
- Set up your computer work area to avoid physical strain. Sit with your back straight and supported by your chair. Adjust your chair or work table so that your arms and wrists can remain in a relaxed position, parallel with the floor. Avoid bending or twisting your wrists as you work. Your hands should “float” slightly above the keyboard. Refer to a book on office ergonomics for more information on setting up your work area.
- Take frequent breaks from working at the computer to rest your eyes and stretch your muscles.
- Remember to save your data files frequently and to make backup copies of your files.

- To reduce the risk of ignition cause by small metallic object, such as paper clip or staples, moving around opening above keyboard, please lock the panel side with main enclosure during transportation.
- The Docking Station Device is not transportable device.

## Travelling with Your Computer

### Air Travel

**If you are travelling by air, follow these tips:**

- Take the computer with you as carry-on luggage. Do not check the computer with your baggage.
- Allow the computer and disks to go through the X-ray security devices. Do not hand-carry disks through the walk-through metal detectors, which can cause loss of data.
- Be prepared to turn off the computer during take off and landing.

## Handling Spills

Do not spill anything on your computer. The best way to avoid spills is to avoid eating and drinking around your computer. If you do spill something on your computer, turn off your computer, unplug it immediately, and do the following:

- If you spill liquid on the keyboard, drain as much of the liquid from the keyboard as possible. Be careful not to let the liquid drip onto the LCD panel. Allow the system to dry for several days before trying to use it.
- If you spill liquid on an external keyboard or keypad, unplug it and drain as much of the liquid as possible. Allow the keyboard to sit at room temperature for a full day before trying to use it.

Sweet liquids leave a sticky residue that may jam the keyboard despite your efforts to dry it.

- If you spill liquid on the LCD panel, clean it immediately with a soft cloth and denatured alcohol or a proprietary LCD screen cleaner. Do not use water, window cleaner, acetone, aromatic solvent, or dry, rough towels to clean it.

Some liquids damage the polarized LCD screen. If your screen is damaged, contact your authorized manufacturer's service center for a replacement.

## Storing the Computer for Long Periods

If you will not be using the computer for a long period of time (a month or more), you should discharge the battery completely then remove the battery from the computer. This extends the life of the battery.

# Troubleshooting

Complete the following in the order presented until your system is functioning properly. If all of the steps below fail then contact your local reseller for assistance.

### *Questions and Answers*

Please see “Questions and Answers” on page 99 for assistance in correcting any computer operational problems.

### *Check the Connections*

Verify all of the power and peripheral cables are securely plugged into their sockets and that your system and power supply is on.

### *Norton AntiVirus*

Run Norton AntiVirus to ensure a virus is not affecting your computer.

**To run Norton AntiVirus proceed as follows:**

Click **Start > All Programs > Norton AntiVirus > Norton AntiVirus 2005**.

### *Windows Help and Support*

Run Windows Help and Support to find problem that may be affecting your computer.

**To run Windows Help and Support proceed as follows:**

Click **Start > Help and Support.**

### *Frequently Asked Questions*

To view FAQ’s on your computer, please visit www.samsungpc.com.

### *Reinstalling Software*

If for some reason your system crashes you may corrupt your HDD, Windows operating system and/or some of your device drivers. If this is the case, use **System Recovery CD** to reinstall **OS** and **System Software CD** to reinstall the corrupt device drivers.

**System Recovery Precaution:**
Before you start restoring your windows operating system insure you backup all data on your hard drive.
*Samsung* is NOT responsible for any data loss.

# Questions and Answers

This section provides information on possible problems, solutions and other references for system use.

## Windows Related

**Q1 The system does not shutdown properly.**

A When the system does not shutdown normally, press and hold the Power button until the system manually shuts off. If the Power-Saving Mode is configured into the Power button, press and hold for more than 4 seconds to shut the system off. When the system is turned on after such manual shutdown, Scandisk will run to check errors in the system.

**Q2 The system freezes during program operation**

**A1** There is an error with the program currently being used. Press the <Ctrl>, <Alt>, and <Delete> keys simultaneously and click and Task in the [Windows Task Manager] window.

**A2** There is an error with the Windows OS. Reboot the system by using the Power button.

**Q3 The system enters rest mode when operating on battery power if the battery charge is too low.**

**A** Connect the AC power immediately. Operating in rest mode for a long period of time may cause loss of data.

## Display Related

**Q1 The LCD screen is too dark or too bright**

**A** Adjust the LCD screen brightness. Use the **<Fn>+<** ☼▼ **>**, **<Fn>+<** ☼▲ **>** keys.

**Q2 The screen saver disturbs screen viewing during Media Player or video file operation.**

**A** Unselect Tools > Options > Player > Allow screen saver during playback in the Media Player.

**Q3 In DOS mode, changing the full screen DOS mode by pressing <ALT>+<Enter> key displays a broken image for a short period.**

**A** The DOS mode which supports 2 Byte characters such as Korean and Japanese runs in graphic not in text mode. In this case, a broken image may be displayed while changing the video mode settings.

**Q4 In the following cases, the screen blinks or displays noise for a short time: (Click on the Graphics related tab, change the Resolution, change the Display Device, remove the AC Adapter, restart the system and change the PowerPlay level.)**

**A** In the above cases, the display devices may flicker for a moment or show some interference.

**Q5 When I connect a projector, and change the setting to display screen image on both the LCD and the projector by pressing <Fn>+<F4 /** 🖳\|🖵**> keys, screen is not displayed properly.**

**A** Press <Fn>+<F4 / 🖳\|🖵> keys once again.

**Q6 The desktop momentarily appears as a broken image when zooming in or out of the Media Player screen when Media Player is running.**

**A** Since zooming in or out of the Media Player screen changes the screen resolution, the desktop may momentarily appear as a 'broken image' during this operation.

**Q7 A DVD or an MPEG file is only played on the LCD (ATI chipset model)**

**A** When both the LCD and the CRT are being used simultaneously, video plays on one of them by default.

1. Right-click over the Desktop and select Properties.
2. In the [Display Properties] window, click the Settings tab > Advanced > ATI Overlay tab.
3. Select the Theater Mode option, and then configure the Overlay Display Mode to 'Theater Mode' or 'All The Same' and then click on Apply. Then you can view the video on both the LCD and CRT screens.

**Q8 When I change the power source to the battery by removing the AC adapter or change the display device to CRT from LCD, I sometimes see a POWERPLAY warning message (ATI chipset models)**

**A** The PowerPlay function is a new technology that extends the battery usage time. PowerPlay works only when the system is operating on battery power and using an LCD. When the PowerPlay function is disabled due to a changed operating environment, the PowerPlay function warning message may be displayed.

**Q9 I cannot see the Taskbar on the Desktop when I use a projector (ATI chipset models)**

**A** This happens because the project does not support 1400x1050 pixels. However the 15.0" SXGA+ LCD supports 1400x1050 pixels. In this case, change the system screen resolution to 1024 x 768 pixels (recommended).

**Q10 The "Video mode not supported" or "Input signal exceeded" message appears for some older model TVs or monitors.**

**A** This problem may occur when the TV or monitor does not support the current system resolution. Change the resolution of the external display device to 800x600 pixels or lower, or do not use Full screen DOS mode.

**Q11 When I used an external display device with the SXGA+ system and disconnected the device from the system, the original screen resolution is not restored.**

**A** In general, when using an external display device with low resolution, the LCD resolution is degraded while using the device and the original resolution is restored automatically after disconnecting the external display device. If the

original resolution is not restored when disconnecting the external display device, complete the following procedures.

Press <Fn>+<F4 / > keys to change the display device.

Otherwise, click the Ati icon on the taskbar, and change the screen resolution to the correct setting.

**Q12 Pressing a function key in DOS mode does not display the OSD (status display icon) on the screen.**

**A** The system does not support OSD display when in DOS mode.

## Modem Related

**Q1 I cannot hear the modem sound.**

**A1** Check that the telephone line is properly connected to the modem.

**A2** Check that the modem driver is installed properly.

1. Click Start > Control Panel > Performance and Maintenance > System.
2. Select Hardware tab > Device Manager > Modems in the System Properties window, and check if there is a yellow exclamation mark on the installed modem icon. If there is, delete the modem device driver and reinstall the driver, because the yellow exclamation mark represents a not properly installed driver.
3. If there is no yellow exclamation mark, double-click the installed modem, and click Diagnostics tab > Query Modem in the Modem Properties window to diagnose the modem.

   No message in either of Command and Response in the Diagnostics tab means that the modem is not operating properly.

   Diagnose the modem again after restarting the system or reinstalling the driver.

   (You have to exit all programs using modem in the advance of diagnostics of the modem).

**Q2 I cannot make a call using an extension line.**

**A** In general, the dial tone of a PBX or a digital phone switching system is not a continuous one, unlike that of a trunk line.

Therefore, the modem may not make a call because the modem mistakes the dial tone from a PBX or a digital phone switching system as a busy tone.

In this case, complete the following procedures.

**- Using an AT command**

As an initialization command, use the command, ATX3.

Otherwise, enter the ATX3 command manually before making a call.

It can correct this problem by skipping the dial tone check step.

**- Configuring the Modem through the Control Panel**

1. Click Start > Control Panel > Network and Internet Connections.
2. Under See Also, click Phone and Modem Options.
3. In the Modems tab, select the installed modem, and click Properties.

4. In the Modem tab of the Modem Properties window, clear the 'Wait for dial tone before dialing' check box.
5. When the configuration is completed, click OK.

**Q3 How do I use my modem when dialing from overseas?**

**A1** Check that the modem is correctly configured according to the current country. Because the values for communication may differ according to the country, you may not be able to connect via the modem due to an incorrect modem configuration.

1. Click Start > Control Panel > Network and Internet Connections.
2. Under See Also, click Phone and Modem Options.
3. In the Dialing Rules tab, click Edit.
4. In the General tab in the Edit Location window, select the current country from the Country/region radio box, specify the Area code, and click OK.

**A2** Because the shape of the telephone plug may differ according to the country, you have to purchase and use the appropriate telephone plug for that particular country.

**Q4 How do I receive a fax while the system is in power saving mode (Rest mode) (For Windows XP and 2000)?**

**A** To receive a fax when the system is in power saving mode, and the operating system is Windows XP or 2000, configure the system as follows:

1. The automatic fax reception function of the fax program needs to be activated. (For more information, refer to the corresponding fax program manual.)
2. Click Start > Control Panel > Network and Internet Connections.
3. Under See Also, click Phone and Modem Options.
4. In the Modems tab, select the installed modem, and click Properties.
5. In the Power Management tab of the Modem Properties window, select the “With this device, exit the computer from stand-by mode” item and then click OK.

   The above setting enables the modem to turn on the system and receive a fax when in power saving mode.

## Wired LAN Related

**Q1 <Wake On LAN> function**

**A** <Wake On LAN> is a function that activates the system in rest mode when a signal (such as ping or magic packet commands) arrives from network (wired LAN).

To use <Wake On LAN> function:

1. Select My Network Places > View network connections from the Desktop.
2. Click the right button on the touchpad over Local Area Connection, and select Properties.
3. Click Configure, and select Power Management tab. Select 'Allow this device to bring the computer out of standby', then click OK. Restart the system.
   - If the system in rest mode is activated when there is no received signal, use the system after disabling <Wake On LAN> function.
   - Connecting wired LAN while using wireless LAN may not execute <Wake On LAN> function. Configure wireless LAN to 'Disable' to use <Wake On LAN> function.

1. Click on **My Network Place> View network connections** on the Desktop.
2. Right-click over **Wireless Network Connection** and select **Disable.**

**Q2 When I connected 100Mbps wired LAN and the computer exits standby/ hibernate mode, a message informing 10Mbps wired LAN connection appears.**

**A** When the computer exits standby/hibernate mode, restoring the network takes about 3 seconds. When the network is restored, it operates in 100Mbps.

## Wireless LAN Related

Refer to ”Connecting Through a Wireless LAN (Option)” (p48) for the basic uses of a wireless LAN.

**Q1 The Wireless LAN device is operating properly, but I cannot connect to the Internet or to another computer.**

This is due to an incorrect configuration, or a configuration error. Check the following check lists:

**A1** If you are using a computer-to-computer (Ad Hoc) network connection, check that the name of the configured network (SSID) is correct. The network name (SSID) is case sensitive.

**A2** If you are using a network key (encryption key), you have to use the same network keys for an AP (Access Point) or a computer-to-computer network (Ad Hoc). The network key of the AP is configured in the AP management program. Ask your network administrator or AP manager for more detailed information.

**A3** Check that the device driver is properly installed. If the driver is not properly installed, you will find a yellow exclamation mark on the network icon by clicking Start > Control Panel > Performance and Maintenance > System > Hardware tab > Device Manager > Network adapters > Wireless LAN adapter. If there is a yellow exclamation mark, please reinstall the device driver with the system software CD.

**A4** Referring to A2 of Q3, Check that the network bridge configuration is correct.

**Q2 The signal strength is excellent, but I cannot connect to the network.**

Even if the signal strength is excellent, the network connection may not operate properly if the TCP/IP properties are not properly configured, or the network key (encryption key) is incorrect.

**A1** Check that the TCP/IP properties are configured properly. When you connect to an AP, click the Wireless Network Connection icon on the taskbar and select the Support tab. If the IP is not allocated properly, the IP address will be displayed as follows (e.g. 169.254.xxx.xxx).
If the network does not provide DHCP, you have to specify the correct IP address by asking your network administrator.
Even if the network provides DHCP, the server may not allocate an IP address to the client properly, and the client station cannot connect to the network.

**A2** Referring to A2 of Q1, check that the network key is correct.

**A3** Referring to Q4, check that AP is operating properly.

**Q3 I cannot share an Internet connection.**

**A1** It may require some time to synchronize the computers to share an Internet connection after the Internet connection sharing configuration is completed. If you cannot share Internet connection even after a longer period, restart the computer.

**A2** Check if the connection between the network adapters is configured to bridge. If there is a configured bridge connection between the network adapters through the network configuration wizard, remove the network bridge, and reconfigure the Internet connection sharing.

A bridge connection is created when you ran Network Setup Wizard from the [Network Connections] window, and selected both the internal connection adapter and another adapter in the wizard.

**Q4 I cannot connect to the AP.**

**Check the Computer Settings**

**A1** Verify whether the wireless LAN function of the computer is on by doing the following. If the wireless LAN function is off, turn it on.

- For Windows XP, verify that the wireless network connection has been set to "Enable" in Start > Control Panel > Network Connections.

- If there is a Wireless LAN On/Off button, check if the wireless LAN button is pressed.

**A2** Verify whether the same network key (encryption key) has been entered in both the AP and the computer.

The network key is an encryption key for encrypting data transmitted between the AP and the computer. It is recommended setting the network key manually.

**Check the AP Settings**

For the AP settings, refer to the User's Guide provided by the AP manufacturer.

**A3** Verify whether the environment is suitable for using a wireless LAN.

The use of a wireless LAN may be restricted according to the environment and distance. Obstacles such as walls or doors affect the use of a wireless LAN. Install the AP in a high and open space 50cm from the wall and far removed from any other radio signal sources.

**A4** Verify whether the AP is operating properly.

- When the AP is not operating normally, turn off the AP and after a short while turn it on again.

- Verify whether the AP's firmware is the most recent version. (Contact the AP manufacturer or the place where you purchased the AP for details of the AP firmware.)

**A5** Verify whether the AP has been properly connected to the network.

Verify whether the network is operating normally by connecting the wired network cable, which has been connected to the AP, to your computer.

**A6** Check the network key settings (encryption key).

When automatic code conversion (a passphrase function) has been selected and data communication is not functioning even with a normal wireless connection, it is recommended entering the network key (encryption key) manually.

**A7** Check the AP settings as follows. (The following is recommended for a standard environment and thus may differ according to the specific wireless network environment.)

- When several APs are present simultaneously, check the channel setting for each AP. When different APs are using nearby channels, interference may occur between electronic waves. Set the APs' channels further apart from each other. (Ex: Ch1, Ch5, Ch9, Ch13)

- When an AP's SSID (Service Set ID) option is set to "Hide", you cannot search for that AP on the computer. We recommend canceling the "Hide" option for an AP. The SSID is a name for distinguishing one wireless LAN from another wireless LAN.

- It is recommended using Long Preamble. Preamble is a signal for data transmission synchronization. Short Preamble may be supported by some types of APs but may cause compatibility problems.

- It is recommended using a static IP.

- Since static channel selection is more reliable than auto channel selection, it is recommended setting a static channel.

**Q5 In the Windows XP 'Available wireless networks' window, the Wireless Network Connection is displayed as 'Not Available'.**

**A1** When there is a Wireless LAN button, ensure that the Wireless LAN button is turned on.

**A2** Check if there is additional program for a wireless LAN connection installed. Windows XP supports wireless LAN connections through the Wireless Zero Configuration (WZC) service. Therefore, an additional program for wireless LAN connection is not required, unless the network requires a specific program. However, installation of some wireless LAN related programs may sometimes

disable the [View Available Wireless Networks] window supported by WZC service. Exit the wireless LAN related program then check whether the window is enabled.

**A3** Initialize the device driver.
Click Start > Control Panel > Performance and Maintenance > System > Hardware tab > Device Manager > Network adapters, and select the wireless LAN adapter. Right-click the network adaptor and select 'Disable'. Then right-click over the network adaptor and select 'Enable' after a short wait to check that the device is operating properly.

**A4** Right-click the My computer icon, and select Manage. When the Computer Management window appears, double-click Services and Applications on the left, and then click Services from the sub menu tree. Select the Standard tab in the right pane, double-click Wireless Zero Configuration and check that Startup Type is configured to Automatic, and the Service status is Started.

**A5** In the case of Windows XP, click Advanced in the [Wireless Network Connection] dialog box (see ”Connecting to an Access Point (AP)” (p49)) and make sure that 'Use Windows to configure my wireless network settings' is selected.

This may happen when a third-party wireless network setup program (e.g. PROSet) other than Windows XP default program is installed. For setting up a wireless network using the Windows XP program, this option should be selected.

**Q6 When connecting to a computer-to-computer (Ad Hoc) network, I cannot connect to another computer connected to the same computer-to-computer network.**

**A1** Make sure that the security settings and network name of the computer-to-computer (Ad Hoc) network is correct.

**A2** Check the TCP/IP properties of the computers to be connected through the computer-to-computer (Ad Hoc) network. All of the computers to be connected through a computer-to-computer (Ad Hoc) network should be configured so that their IP addresses are within the same subnet range.
- If the TCP/IP Settings are configured to DHCP, the address is automatically configured to an address within the subnet IP range. This will take about 2~3 minutes.

- If the IP address is configured to static IP in TCP/IP properties, select Use the following IP address in the TCP/IP properties of the wireless adapter, configure IP address:10.0.0.1~10.0.0.254, and Subnet mask: 255.255.0.0, and then try again.

- A fixed IP is recommended for a small-size network.

**Q7 When using a computer-to-computer (Ad Hoc) network, sometimes I cannot search the access point.**

**A** It may happen occasionally when you are using a computer-to-computer (Ad Hoc) network connection. Even if you cannot find some access points, the computer-to-computer (Ad Hoc) network is operating properly. Click Refresh to view the latest search result.

**Q8 Running Help file while running Profile Wizard in the wireless LAN program (PROSet) makes the PROSet window white.**

**A** It will be displayed properly when you finish the profile wizard. It dose not affect the program operation.

**Q9 The network does not operate properly when both the wireless and the wired network connections are simultaneously configured with the same IP address.**

**A** You cannot use the wireless and the wired network connections using the same IP address simultaneously. To use either the wireless or the wired network in turn with the same IP address, you have to Disable whichever network device will not be using in the network connection of the Control Panel.

**Q10 The wireless LAN does not work properly when there is a device operating on an adjacent frequency in the vicinity of the product.**

**A1** Channel interference may occur when a wireless video transceiver or a microwave oven is being used.If you experience channel interference from other equipment, it is recommended changing the channel to connect to the AP. For more information about AP settings, refer to the User Manual supplied by the AP manufacturer.

**A2** IEEE802.11g equipment operates in hybrid mode when there is active IEEE802.11b equipment. This may result in data rate degradation.

**Q11 An established wireless LAN connection is disconnected after 2~3 minutes, and the connection is not recovered.**

**A1** This may be caused by channel interference. Change the channel of the AP, and reconnect.

**A2** This may be caused by selecting the 'Use IEEE 802.1x network authentication' option when IEEE 802.1x authentication is not available.

Check the properties of the AP in the wireless network settings. If the 'Use IEEE 802.1x authentication in this network' option is selected, deselect the option on the Authentication tab.

For more detailed information about authentication server, ask your network administrator.

**A3** If the AP is configured to 'Use network authentication (Shared Key)'

If the AP is configured to authentication shared mode, all computers to be connected should be configured as follows:

- If you are using Windows XP, select network authentication(shared mode) in the wireless network settings.

Click Start > Control Panel > Network and Internet Connections > Network Connections. Right-click the Wireless Network Connection icon, and click View Available Wireless Networks > Advanced. In the Wireless Networks tab, select an AP in the Available Networks field and click Configure and select 'Network Authentication (Shared Mode).

- If you are using Windows 2000, check that the network authentication mode is configured to Share in the security settings of the wireless LAN program (PROSet).

For more network authentication procedures, ask your AP (Access Point) administrator.

**Q12 After PROSet is installed, The "AEGIS Protocol (IEEE 802.1x) v2.2.1.0" appears in the [Local Area Connection Properties] window.**

**A** The AEGIS Protocol is a security authentication protocol that is automatically installed when PROSet is installed and does not affect the operation of other programs.

**Q13 Although I have turned the wireless LAN off using the Off Button on the PROSet, the wireless LAN operating light is still on.**

**A** This is normal. The Off Button for the Wireless LAN on the PROSet only turns off the S/W and not the H/W for the Wireless LAN.

**Q14 After installing the PROSet, I cannot manage the wireless network under Windows.**

**A** Click on "Use Microsoft Client" in the Tools menu of the PROSet program to manage a wireless network in Windows.
To manage a wireless network in the PROSet program, click on "Use Inter PROSet/Wireless" in the Tools menu of the PROSet program.

## Games and Programs Related

**Q1 3D game is not executed, or some functions are not working.**

**A** Change the graphic setting of the game to '2D' or 'Software Renderer', then execute the program again.

**Q2 I launched a game right after installing it, and the game is not executed.**

**A** This problem may occur when the game is not compatible with Windows XP. Launch the game again, and it will be executed properly.

**Q3 A game runs only in small screen format.**

**(ATI chipset models)**

**A** This may happen when the display settings are configured to reduced mode ('Use Centered Output'). To view the game in full screen mode, complete the following procedures.

1. Right-click on the desktop using the touchpad, and then select Properties.
2. In the [Display Properties] window, click the Settings tab > Advanced > ATI Display tab.
3. Select the Panel item, and select ‘Extend the image to the screen size’ in the Display Properties.

**(Intel chipset models)**

**A1** Before launching a game, right-click over the Desktop, and select Graphics Option >Fit to Monitor > Available.

**A2** Before launching a game, configure to the Full Screen mode as follows.

1. Right-click in the video screen,
2. Click Graphics Options > Graphics Properties > Devices tab.
3. Click the corresponding device and then select 'Full Screen'.
4. Click OK.

**Q4 While playing a 3D game, I tried to change display devices using <Fn> + <F4/> keys, then the system does not operate.**

**A** When you use <Fn> + <F4 / > keys while playing a 3D game, a system error may occur.
Do not use <Fn> + <F4 / > keys while playing a 3D game.

**Q5 <Fn+F4/ > Key combination does not work.**

**A** While displaying video of VCD or MPEG, or the display setting is Dual View, you cannot toggle display devices. Also the installation of NetWare Client 32 program disables the function of <Fn+F4/ >.

**Q6 While playing a game, pressing the <Fn>+<F4 />keys does not work or the screen is not properly displayed.**

**A** Some games and 3D application programs may change the display device control. Therefore, pressing the <Fn>+<F4 /> keys may terminate the running program or may display an abnormal screen.

Press the <Fn>+<F4 /> keys before launching a program and do not press them while running the program.

**Q7 Running speed of a game is too slow or fast.**

**A** Change the setting of Power Schemes to 'Always On'.
(Click Start > Control Panel > Performance and Maintenance > Power Options > Power Schemes tab, then configure the Power schemes field to 'Always On'.)

**Q8 Pressing <Fn>+<F2/ > keys while running a game may cause abnormal operation of the system.**

**A** Do not press <Fn>+<F2/ > keys while a game is running, because it may cause a system error.

**Q9 Some part of a game image is not displayed or is displayed in black.**

**A** This may happen when running a game designed for DirectX 8.1, such as NHL 2003, MVP Baseball 2003, etc.

**Q10 When playing a game, the image display temporarily freezes a number of times.**

**(ATI chipset models)**

**A** This may happen when the PowerPlay setting is configured to ‘Optimal Battery usage time’ or ‘Balance’.

1. Right-click over the Desktop and then select Properties.
2. In the [Display Properties] window, select the Settings tab > Advanced > ATI POWERPLAY tab.

3. Click the PowerPlay Settings button, and set the Plug-In, High Battery and Low Battery sliders to ‘Optimal Performance’ and then click Apply.

**(Intel chipset models)**

**A** This may happen when using the DFGT function.

1. Right-click over the Desktop and select Graphics Option > Graphics Properties > Device tab.
2. Click Notebook and click ‘Power Schemes Settings'.
3. Unselect 'Intel® Dual-Frequency Graphics Technology'.
4. Click OK.

**Q11 The screen is severely interrupted in some games.(ATI chipset models)**

**A** In 3D games, the texture data needed in 3D screen presentation are stored in the system memory. When the system memory is not enough, the data is stored in the hard disk and transferred to system memory when the data is needed. In some games, the screen may be interrupted during this process.

Lower the game resolution or texture image quality.(Linage 2, Terminator 3, Delta Force : Black Hawk Down, Medal of Honor, Battlefield 1942, etc.)

**Q12 When I run 'The Sims Fun Party' game in Dual Display Clone mode, a mouse cursor afterimage appears (Intel chipset models)**

A Change the display device to LCD only, by pressing the <Fn>+<F4 / > keys and launch the game again.

**Q13 When I play multiple avi and mpg files with Mplayer2, a different screen plays (Intel chipset models)**

**A** This may happen when you play more than 3 video files simultaneously. Please play only up to 2 video files at a time.

## Security Center

**Q1 To change the popup window display settings when connected to the Internet.**

In the Windows XP SP2 environment, you can decide whether to display a popup window when connected to the Internet, for user convenience and security.

**A1** To display most of the popup windows when connected to the Internet:

1. Click on Internet Options in Start > Control Panel > Security Center > Manage security settings for.
2. In the Privacy tab of Internet Properties, clear Block pop-ups.

**A2** To display popup windows only from the current site when connected to the Internet:

Place the cursor on the notification area at the bottom of the Internet address bar and right-click to display a menu, from which you can select Temporarily Allow Pop-ups or Always Allow Pop-ups from This Site.

**A3** To display popup windows from a particular site:

1. Click on Internet Options in Start > Control Panel > Security Center > Manage security settings for.
2. In the Privacy tab of Internet Properties, click on Settings from Block pop-ups.
3. Enter a URL to want to allow pop-ups into Address of Web site to allow and click on Add.
4. You will find that the entered address is added to the allowed sites list. The next time you connect to the Web site, you will see pop-ups appearing.

   When you need to re-block a permitted site, select the Web site address that you want to block from the Allowed Sites and click on Remove.

**Q2 When you connect to a Web site, you see the message, "To help protect your security, Internet Explorer stopped this site from installing an ActiveX control on your computer" or "This site might require the following ActiveX control" below the address bar.**

**A** Windows XP SP2 blocks unsigned ActiveX controls from being installed when connected to certain Web sites for security reasons. On some Web sites that have no ActiveX controls installed, applications are not started or do not display properly.

In this case, to install ActiveX controls, right-click the notification area to display a menu from which you can select Install ActiveX control.

**Q3 When you see a Windows Security Alert icon ( ) appear on the right part of the task bar.**

With the Security Center feature added, Windows XP SP2 checks the Firewall, the automatic updates configuration and installation of virus-checking programs to display a Windows Security Alert icon on the right part of the task bar when it judges that the computer is vulnerable to attacks from the Internet. In this case, check the following to install the necessary components.

**A1** Set up the Windows Firewall.
When you set up the Windows Firewall, you will be protected from unauthorized access through the Internet or the network.

1. Click on Windows Firewall in Start > Control Panel > Security Center > Manage security settings for.
2. From the General tab of Windows Firewall, select ON (recommended).
3. If you want to allow a certain program or service to gain access to your computer using the Firewall, select and check the program or service that you want to allow access from, in the Exceptions tab of the Windows Firewall. If you want to add a program to Programs and Services, click on Add Program and select it.

**A2** Set up Windows Automatic Updates.
This automatically downloads and installs critical updates via the Internet to keep your computer up to date.

1. Click on Automatic Updates in Start > Control Panel > Security Center > Manage security settings for.
2. From general tab of Automatic Updates window, select Automatic (recommended).

**A3** Keep your computer current with the latest virus updates. (ex: Norton Antivirus)
Even when you have installed Norton AntiVirus on your computer, Windows cannot recognize the program until you configure the settings, displaying a Security Alert icon.
When you first use or install Norton AntiVirus for the first time, follow the Registration Wizard steps to configure the registration settings.
To protect your computer from virus attacks with the latest updates, click on Options to display the Norton AntiVirus Options window. From the left menu of the window, check Run Automatic Protection to select Automatic Protection and check Run LiveUpdate to select LiveUpdate.

**A4** Two virus scanning programs on one computer may cause system conflicts. Remove one of the programs from the system.

**A5** If Windows does not recognize the existence of an anti-virus program even when it has been installed, your computer could be vulnerable to attacks from the Internet. You should install an anti-virus program that your computer is able to identify.

Check the following programs which Windows can detect and select one from the list.

A list of anti-virus programs that Windows can detect:

-Symantec Norton Anti-Virus

-NetworkAssociates (McAfee)

-TrendMicro

-ComputerAssociates

-Panda

-Kaspersky

-Ahnlabs (AhnLab)

The list is subject to change. Visit the Web site (www.microsoft.com) regularly to check the latest list

## HD TV Related

**Q1 On a component TV, the Full Screen DOS Mode screen does not display.**

**A** A component TV does not support the Full Screen DOS Mode screen due to an output power problem of the TV. Please use DOS mode in a window when using a component TV.

**Q2 The colors are too blurred.**

**A** Depending on the model of the TV or the color settings, a specific color may dominate. Adjust the color settings of the TV.

**Q3 When I watch a DVD and the resolution is higher than 540, the screen is not displayed or an error message appears.**

**A** The DVD international standard does not support resolutions higher than 480P. Configure the resolution of the component output mode to lower than 480P.

**Q4 How can I configure a component TV device?**

**(ATI chipset models)**

**A** 1. Right-click over the Desktop and then select Properties.

2. In the [Display Properties] window, select the Settings tab > Advanced > ATI Display tab.

3. Select the YPbPr item and click the Apply button.

4. Click the YPbPr button and select the appropriate TV type and then click the Apply button.

**(Intel chipset models)**

**A** Open the Graphics Properties window according to the following procedures.

1. Right-click over the Desktop and then select Graphics Option >Graphics Properties.

2. Select TV from the Device tab.

3. Select a resolution or type and click the Apply button.

**Q5 The screen does not display on the component TV.**

**(ATI chipset models)**

**A** This happens when the TV does not support the component TV mode configured in the video driver.

1. Click Display Properties > Settings > Advanced > Display tab > YPbPr button.

2. Select the relevant modes (480i, 480p, 540p, 720p,1080i,16:9) and click the Apply button. (At this time, the mode changes to the highest of the selected modes depending on the supported modes of the TV.)

3. Double-click the On/Off button of the YPbPr to change to the configured mode.

4. Click the Apply button.

**(Intel chipset models)**

**A** This happens when the TV does not support the component TV mode configured in the video driver.

1. Launch the Intel Graphics Properties.

2. Select TV from the Device tab, select a mode (720p,1080i) and click the Apply button

**Q6 When I am watching the screen on a TV using YPbPr, the edges of the screen are trimmed.**

**(ATI chipset models)**

**A** Due to the hardware limit of the current ATI video chipset, a HDTV Underscanning function is not supported so that edges of the screen are trimmed. The amount of edges trimmed is determined by the YPbPr mode and the TV type.

**(Intel chipset models)**

**A** Check that 'Full Screen' is selected in the Intel graphics properties. This happens because the current Intel chipset does not support the HDTV Underscanning function. The amount of edges trimmed is determined by the YPbPr mode and the TV type.

**Q7 I cannot change the display device to the component TV by pressing the <Fn>+<F4 / > keys. (ATI chipset models)**

**A** Pressing the <Fn>+<F4 / > keys does not change the display device to a component TV because of an output power problem.

# Restoring the System

This description is only for models running Window XP.

The System Restore function allows you to restore your computer to an earlier copy (called restore point), and restores the settings if a problem occurs.The System Restore function is provided by Windows XP to enable the resolution of various problems without reinstalling Windows XP completely.

You can use System Restore in the following cases.

- The system files are deleted or damaged by mistake.
- The system is unstable or a problem occurs in a device driver.
- A problem occurs after changing system files such as the registry.
- A problem occurs after installing a new program.

## Creating a Restore Point

Restore points are created at predetermined times and at times of significant system events such as when a program or a driver is installed. You can also decide when to create your own restore points.

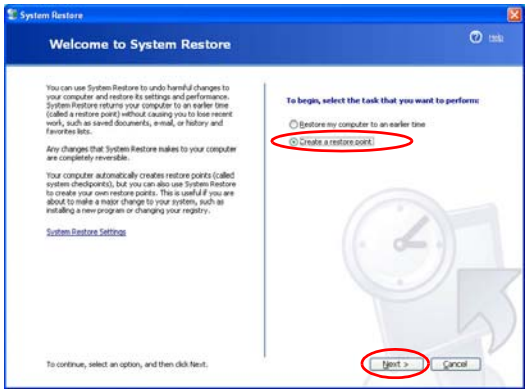
There has to more than 200MB of free space on the hard disk drive. If the disk space is insufficient, a saved restore point might be deleted.

You are recommended to create a restore point when you have purchased a new computer and before installing new programs or device drivers. Before creating a restore point, check that the computer is operating properly.

The procedures to create your own restore point are described below.

1. Click **Start > All Programs > Accessories > System Tools > System Restore**.

2. Select "Create a restore point", and click **Next**.


System Restore
Welcome to System Restore
You can use System Restore to undo harmful changes to your computer and restore its settings and performance. System Restore returns your computer to an earlier time (called a restore point) without causing you to lose recent work, such as saved documents, e-mail, or history and favorites lists.
Any changes that System Restore makes to your computer are completely reversible.
Your computer automatically creates restore points (called system checkpoints), but you can also use System Restore to create your own restore points. This is useful if you are about to make a major change to your system, such as installing a new program or changing your registry.
System Restore Settings
To continue, select an option, and then click Next.
To begin, select the task that you want to perform:
Restore my computer to an earlier time
Create a restore point
Next >
Cancel

Since changes made after the Recovery Point may not be maintained, please back-up all necessary files to another location before performing system recovery.

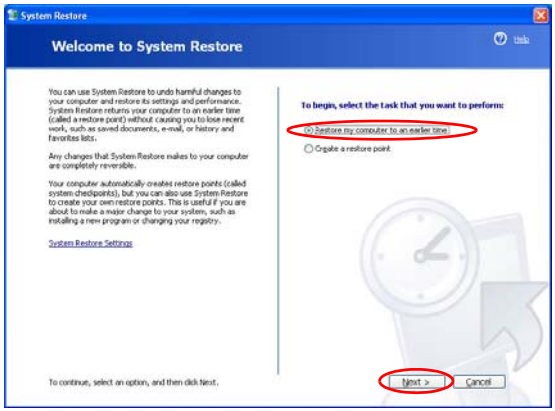
3. In the Restore point description box, type a name to identify the restore point, and than click **Create**. A restore point has been created.

## Returning your computer to an earlier restore point

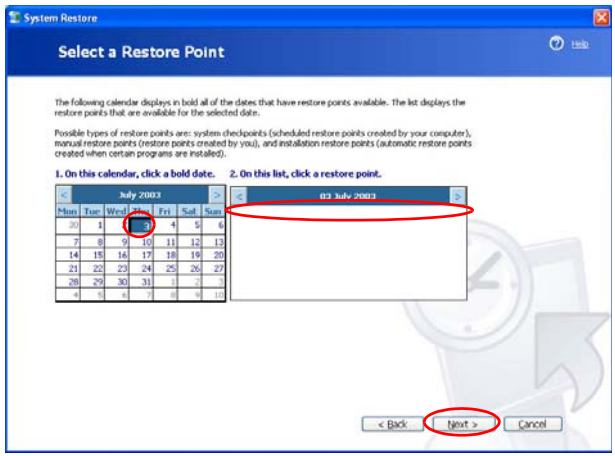
The procedures to return your computer to an earlier restore point when a problem has occurred are described below.

1. Click **Start > All Programs > Accessories > System Tools > System Restore**.

2. Select "Restore my computer to an earlier time", and then click **Next**.


System Restore
Welcome to System Restore
Help
You can use System Restore to undo harmful changes to your computer and restore its settings and performance. System Restore returns your computer to an earlier time (called a restore point) without causing you to lose recent work, such as saved documents, e-mail, or history and favorites lists.
Any changes that System Restore makes to your computer are completely reversible.
Your computer automatically creates restore points (called system checkpoints), but you can also use System Restore to create your own restore points. This is useful if you are about to make a major change to your system, such as installing a new program or changing your registry.
System Restore Settings
To begin, select the task that you want to perform:
Restore my computer to an earlier time
Create a restore point
To continue, select an option, and then click Next.
Next >
Cancel

3. Select the desired restore date from the calendar restoration and select the desired restore point from the list, and then click **Next**.


System Restore
Select a Restore Point
Help
The following calendar displays in bold all of the dates that have restore points available. The list displays the restore points that are available for the selected date.
Possible types of restore points are: system checkpoints (scheduled restore points created by your computer), manual restore points (restore points created by you), and installation restore points (automatic restore points created when certain programs are installed).
1. On this calendar, click a bold date.
2. On this list, click a restore point.
July 2003
Mon Tue Wed Thu Fri Sat Sun
03 July 2003
< Back
Next >
Cancel

The date of the restore point is displayed in bold font.

4. Confirm the selected restore point and click **Next**. System Restore shuts down Windows, and starts the restoration processes.

5. After the restoration is complete, Windows restarts. In the [System Restore completed] dialog, click **OK**.Your computer has been restored to the selected restore point.

## Undoing the last restoration

The procedures to undo a restoration are described below.

1. Click **Start > All Programs > Accessories > System Tools > System Restore**.
2. Select "Undo my last restoration", and then click **Next**.
3. Confirm the restoration information to undo, and than click **Next**. System Restore shuts down Windows and starts undoing the restoration.
4. After the undo restoration is complete, Windows restarts. In the [Undo the last restoration completed] dialog, click **OK**.Your computer has been restored to the point prior to the last restoration.

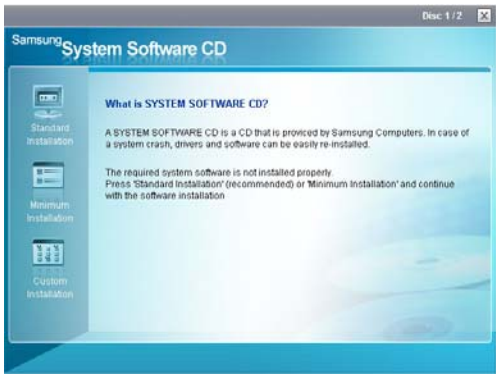
# Reinstalling Software

If you have reinstalled the Windows operating system, or the system and program do not operate properly, you can re-install the driver and program using the system software CD.

This computer is optimized for Microsoft Windows XP, therefore driver other than the ones included in the System Software CD are not provided.

## Running the system software CD

Insert the system software CD into the CD-ROM drive. The initial screen appears automatically.


Disc 1 / 2
Samsung System Software CD
Standard Installation
Minimum Installation
Custom Installation
What is SYSTEM SOFTWARE CD?
A SYSTEM SOFTWARE CD is a CD that is provided by Samsung Computers. In case of a system crash, drivers and software can be easily re-installed.
The required system software is not installed properly.
Press 'Standard Installation' (recommended) or 'Minimum Installation' and continue with the software installation

- **Standard Installation**: This displays a list of drivers or programs that are not currently installed on your computer from the system software CD provided. All necessary components are installed using the factory defaults.
- **Minimum Installation**: This displays the components (driver, Windows programs, etc) that, if not installed, may cause problems with the system performance. You can install only required components.
- **Custom Installation**: You can customize the installation of drivers and programs.

## Installing drivers and programs

1. Click **Standard Installation** in the main window of the System Software CD. (Standard Installation is recommended)
2. The system is scanned to display the drivers and programs that need to be installed.
3. Click **OK**. The drivers and programs are automatically installed as factory defaults.

4. When done, restart the system.

# Reinstalling Windows XP

If the Windows XP does not operate properly due to an error in the system, or if you have replaced the hard disk drive, you can reinstall Windows XP using the system recovery CD.

With the system recovery CD, you can reinstall Windows XP only. To return the system to the state of shipment, reinstall the device drivers and programs with the system software CD after reinstalling Windows XP with the system recovery CD.

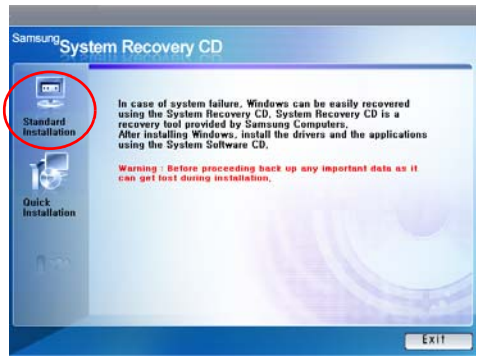
Reinstalling Window may delete the data on the hard disk drive such as files, programs, etc. In order to minimize damage from data loss, please remember to always back up data. Samsung Electronics is not liable in the case of data loss, please consult your warranty statement for clarification.

**When you have set a booting password**
You are asked to enter your booting password after restarting the system during the Windows installation. Enter the password to continue to the next steps.

## Reinstalling Windows

Explain Standard installation option as a standard.

1. Insert the system recovery CD into the CD-ROM drive.
2. In the initial screen, click **Standard Installation**.


Samsung System Recovery CD
Standard Installation
Quick Installation
In case of system failure, Windows can be easily recovered using the System Recovery CD. System Recovery CD is a recovery tool provided by Samsung Computers. After installing Windows, install the drivers and the applications using the System Software CD.
Warning : Before proceeding back up any important data as it can get lost during installation.
Exit

- **Standard installation**: You can change the settings for partitioning, the installation folder, etc. during the Windows installation. However, reinstalling Windows may delete the data on the hard disk drive such as files, programs, etc. In order to minimize damage from data loss, please remember to always back up data.
- **Quick Installation**: This re-installs Windows with the user data and the system configuration intact. The user data in the already existing Windows folders may be preserved as the existing Windows folders are overwritten.

3. The description for the standard installation appears. Click **Yes**.
   The installation starts, and the system will be restarted after a while.

When Quick Installation is selected,
Setup proceeds with Step 3 before automatically installing Windows. Quick Installation overwrites the existing Windows version, so that drivers or applications do not need to be reinstalled.

4. After the system has restarted, the message 'Press any key to boot from CD' appears. Do not press any key at this time. After a while the partition configuration screen appears.
   To not change the partition, press <**Enter**>.

   **What is partition configuration?**
   Partition configuration is a function that devides the hard disk drive into one or several partitions. Note that changing the partition deletes all of the data on the hard disk drive.

5. Select the folder to install the Windows operating system.
   To delete the previous version of Windows and install in the current folder, press <**L**> on the keyboard.

If you press ESC to select another folder for the installation, new Windows folders are created causing a risk of dual booting.

6. After the installation process copies the necessary folders for the Windows installation, restart the system, and the message "Press any key to boot from CD" is displayed. You do not need to enter anything. In a moment, the Windows XP installation screen will appear to proceed with the installation.
7. When **the Regional and Language Options** window appears, click **Next**.

8. When a window that requires your name and organization pops up, enter your name and the organization and click **Next**.
   In the Windows XP Professional edition, an additional window that requires the computer name and the administrator password appears.
   Enter **the computer name and the administrator password** and click **Next**.
9. When **the Date and Time Settings** window appears, click **Next**.
   Setup will continue.
10. When the system restarts to display  Press any key to boot from CD, do not press any key.

When you see the Windows desktop, this means that the installation process is completed. Remove the system recovery CD and install **the device drivers and applications** from **the system software CD**.

## If You Cannot Run Windows

If you cannot run Windows, you have to boot the system with the system recovery CD, and reinstall Windows. If you boot the system from the system recovery CD, you can install Windows only with the user installation option. You cannot install with the standard installation option.

1. Insert the system recovery CD into the CD-ROM drive and start the computer.
2. If the following message appears on the screen, press any key from the keyboard.

**Press any key to boot from CD.....**

This message appears only when the CD drive has booting priority. If the message does not appear, configure the CD drive as the first booting device referring to ”Changing Booting Priority” on page 72.

3. Do not press any key at this time. After a while the partition configuration screen appears.
   To not change the partition, press **<Enter>**.
4. Select the desired file system ( format ).
   To maintain the current file system, press **<Enter>**.
5. Select the folder to install the Windows operating system.
   To delete the previous version of Windows and install in the current folder, press **<L>** on the keyboard.
6. After the installation process copies the necessary folders for the Windows installation, restart the system, and the message “Press any key to boot from CD” is displayed. You do not need to enter anything. In a moment, the Windows XP installation screen will appear to proceed with the installation.
7. Follow the instructions of the Windows XP installation wizard to continue with the installation.
8. When the installation is complete, the computer will restart.
   When the system has restarted, the Press any key to boot from CD message appears. Ignore the message.

The system boots and the Windows and Windows Registration screen appears. Register Windows, following the instructions to finish the Windows installation. Remove the System Recovery CD and install the **device drivers** and **application programs** using **Standard Installation** from the **System Software CD**.

# Specifications

## System Specification

The system specifications will be described below. The system specifications may differ depending on the derived models.

### With an Intel Graphics Chipset

| Item | Specification | Remarks |
|---|---|---|
| **CPU** | Intel Pentium M 1.6GHz~ / Dothan (FSB533) / Celeron M | Optional |
| **Cache memory** | 2MB (Dothan) / Celeron 1MB | |
| **Main memory** | 256/512/1024 MB DDR2 SDRM, 2 DDR2 socket | Max 2GB |
| **Main Chipset** | Intel 915GM (Alviso GM) / 82801FBM (ICH6-M) | |
| **Hard disk drive (HDD)** | 2.5", UltraDMA100, S.M.A.R.T 9.5mmH | |
| **CD drive** | DVD-ROM, CD-RW / DVD-Rom Combo, DVD-Super Multi | Optional |
| **Graphics** | Intel 915GM | |
| **Sound** | SigmaTel C-Major Audio (AC97 CODEC) | |
| **Network Interface** | Modem: SENS LT56ADW (V.92 Modem)<br>Wired LAN: Broadcom 440x 10/100 Intergated Controller<br>Wireless LAN: 802.11g or 802.11a/g<br>Bluetooth : Bluetooth 1.1 | <br><br>Optional<br>Optional |
| **Memory Card Slot** | Memory Stick, Memory Stick Pro, SD(Secure Digital) Memory Card Supported | Optional |
| **PCMCIA Slot** | Type I and II Compatible | |
| **TPM** | Trusted Platform Module | Optional |
| **Ports** | IEEE 1394 (6 Pin), USB2.0 x 4, Microphone, Headphone, Modem(RJ-11), LAN(RJ-45), Monitor, TV Out(S-Video) , Serial and Parallel | |
| **Options** | Port Replicator, 2nd HDD Pack | |
| **Dimensions (mm)** | 327.5 x 275.5 x 32.2(15.1") | W x D x H |
| **LCD Panel Size** | 14.1" XGA, 15.0" XGA, 15.0" SXGA+ | Optional |
| **Weight** | 2.7 Kg | |
| **Battery** | Lithium-Ion smart battery | |
| **Operation Environment** | Temperature (storage) : -5 ~ 40°C (operation) : 10 ~ 32° C<br>Humidity (storage) : 5% ~ 90% (operation) : 20% ~ 80% | |
| **Operation Voltage** | 100 - 240 VAC | |
| **Frequency** | 50 - 60 Hz | |
| **Output Power** | 60W* | |
| **Output Voltage** | 19.0VDC | |

The system specifications are subject to change without notice. For detailed system specifications, refer to the product catalog.

*) Using the AC adapter (60W) in other models may cause a system malfunction. Please use only an AC adapter specified in the system specification.

## With an ATI Graphics Chipset

| Item | Specification | Remarks |
|---|---|---|
| **CPU** | Intel Pentium M 1.6GHz~ / Dothan (FSB533) / Celeron M | Optional |
| **Cache memory** | 2MB (Dothan) / Celeron 1MB | |
| **Main memory** | 256/512/1024 MB DDR2 SDRM, 2 DDR2 socket | Max 2GB |
| **Main Chipset** | Intel 915PM (Alviso PM) / 82801FBM (ICH6-M) | |
| **Hard disk drive (HDD)** | 2.5", UltraDMA100, S.M.A.R.T 9.5mmH | |
| **CD drive** | DVD-ROM, CD-RW / DVD-Rom Combo, DVD-Super Multi | Optional |
| **Graphics** | ATI Mobility Radeon X300/X600, Memory : 64/128MB | |
| **Sound** | SigmaTel C-Major Audio (AC97 CODEC) | |
| **Network Interface** | Modem: SENS LT56ADW (V.92 Modem)<br>Wired LAN: Broadcom NetLink Gigabit Ethernet<br>Wireless LAN: 802.11g or 802.11a/g<br>Bluetooth : Bluetooth 1.1 | <br><br>Optional<br>Optional |
| **Memory Card Slot** | Memory Stick, Memory Stick Pro, SD(Secure Digital) Memory Card Supported | Optional |
| **PCMCIA Slot** | Type I and II Compatible | |
| **TPM** | Trusted Platform Module | Optional |
| **Ports** | IEEE 1394 (6 Pin), USB2.0 x 4, Microphone, Headphone, Modem(RJ-11), LAN(RJ-45), Monitor, TV Out(S-Video) , Serial and Parallel | |
| **Options** | Port Replicator, 2nd HDD Pack | |
| **Dimensions (mm)** | 327.5 x 275.5 x 32.2(15.1") | W x D x H |
| **LCD Panel Size** | 14.1" XGA, 15.0" XGA, 15.0" SXGA+ | Optional |
| **Weight** | 2.7 Kg | |
| **Battery** | Lithium-Ion smart battery | |
| **Operation Environment** | Temperature (storage) : -5 ~ 40°C (operation) : 10 ~ 32° C<br>Humidity (storage) : 5% ~ 90% (operation) : 20% ~ 80% | |
| **Operation Voltage** | 100 - 240 VAC | |
| **Frequency** | 50 - 60 Hz | |
| **Output Power** | 90W | |
| **Output Voltage** | 19.0VDC | |

The system specifications are subject to change without notice. For detailed system specifications, refer to the product catalog.

# Wireless LAN Specification (Optional)

## Intel(R) PRO/Wireless 2200BG Network Connection

### *Product Specification*

| Item | | Detailed Specifications |
|---|---|---|
| **Physical Specifications** | Dimensions | (Width X Height) 59.75 X 44.45 mm |
| | operation temperature and humidity | Same as system operation |
| | | Temperature: 0°C ~ 70°C<br>Humidity: less than 85% |
| **Power Specification** | Power Saving Mode | 135 mW |
| | Receiving Mode | 0.85W |
| | Transmission Mode | 1.45W |
| | Power | 3.3V |
| **Network Specifications** | Compatibility | IEEE 802.11b, IEEE 802.11g |
| | Operating System | Microsoft Windows XP, 2000<br>- NDIS5 Miniport Driver |
| | Media Access Protocol | CSMA/CA (Collision Avoidance) with Acknowledgement(ACK) |
| | Security | Wired Equivalent Privacy support (WEP) 64bit/128bit<br>WPA*, CCX* |

* This piece of equipment supports the Wi-Fi wireless LAN security standard, WPA (Wi-Fi Protected Access) and CCX (Cisco Compatible eXtensions). To connect to a wireless network consisting of the WPA and CCX certificates or PROSet may be required depending on the network settings. For information on the PROSet installation, refer to "Wireless Network Setup Using the Wireless LAN Setup Program" (p57). For more information, ask your network administrator.

### *Radio Specifications*

| | |
|---|---|
| RF Band | 2.4GHz |
| Support Channels | Channels allowed per country. |
| Device | Transceiver |
| Standard Output Power | 5 mW |
| Transmission Method | 11b mode: DSSS<br>11g mode: OFDM |
| Transmission Rate (Mbps) * | 11b mode: 11, 5.5, 2, and 1<br>11g mode** : 54, 48, 36, 24, 18, 12, 9, and 6 |
| Antenna Type | Internal Antenna 2 EA (Main/Aux) |

* The transmission rate may differ from the actual transmission rate.
** 11g mode is supported only when the device is connected with an IEEE802.11g device (e.g. IEEE802.11g compatible Access Point).

### *Regulatory Notice for Channel Use in France*

The number of channels that can be used for wireless LAN differs from country to country. In France however, use only 4 channels (channel 10, 11, 12, 13) when using wireless networks.

- Standard: IEEE 802.11g
- Regulation: ETSI 300 328, CE Marked
- Channel Allocation:
  - Channel 10 (2457 MHz)
  - Channel 11 (2462 MHz)
  - Channel 12 (2467 MHz)
  - Channel 13 (2472 MHz)

## Intel(R) PRO/Wireless 2915ABG Network Connection

### *Product Specification*

| Item | | Detailed Specifications |
|---|---|---|
| **Physical Specifications** | Dimensions | (Width X Height) 59.75 X 44.45 mm |
| | operation temperature and humidity | Same as system operation |
| | | Temperature: 0°C ~ 70°C<br>Humidity: less than 85% |
| **Power Specification** | Power Saving Mode | 135 mW |
| | Receiving Mode | 0.85 W |
| | Transmission Mode | 1.45 W |
| | Power | 3.3V |
| **Network Specifications** | Compatibility | IEEE802.11a, IEEE802.11b, IEEE802.11g |
| | Operating System | Microsoft Windows XP, 2000<br>- NDIS5 Miniport Driver |
| | Media Access Protocol | CSMA/CA (Collision Avoidance) with Acknowledgement(ACK) |
| | Security | Wired Equivalent Privacy support (WEP) 64bit / 128bit<br>WPA*, CCX* |

* This piece of equipment supports the Wi-Fi wireless LAN security standard, WPA (Wi-Fi Protected Access) and CCX (Cisco Compatible eXtensions). To connect to a wireless network consisting of the WPA and CCX, certificates or PROSet may be required depending on the network settings. For driver update, visit www.samsung.com and for information on the PROSet installation, refer to "Wireless Network Setup Using the Wireless LAN Setup Program" (p57). For more information, ask your network administrator.

## Radio Specifications

| | |
|---|---|
| RF Band | 2.4GHz, 5GHz |
| Support Channels | Channels allowed per country. |
| Device | Transceiver |
| Standard Output Power | 5 mW |
| Transmission Method | 11a mode: OFDM<br>11b mode: DSSS<br>11g mode: OFDM |
| Transmission Rate (Mbps) * | 11a mode**<br>11b mode: 11, 5.5, 2, and 1<br>11g mode*** : 54, 48, 36, 24, 18, 12, 9, and 6 |
| Antenna Type | Internal Antenna 2 EA (Main/Aux) |

* The transmission rate may differ from the actual transmission rate.
** 11a mode is supported only when the device is connected with an IEEE802.11a device (e.g. IEEE802.11a compatible Access Point).
***11g mode is supported only when you are connected to an IEEE 802.11g device (e.g. An Access Point supporting IEEE 802.11g).

## Regulatory Notice for Channel Use in France

The number of channels that can be used for wireless LAN differs from country to country. In France however, use only 4 channels (channel 10, 11, 12, 13) when using wireless networks.

- Standard: IEEE 802.11a/g
- Regulation: ETSI 300 328, CE Marked
- Channel Allocation:
  - Channel 10 (2457 MHz)
  - Channel 11 (2462 MHz)
  - Channel 12 (2467 MHz)
  - Channel 13 (2472 MHz)

# Abbreviations

**A** . . . . . Amperes
**AC** . . . . . Alternating current
**ACPI** . . . . . Advanced Configuration and Power management Interface
**APM** . . . . . Advanced Power Management
**ATA**. . . . . AT attachment (refers to the hard-drive interface in an AT-compatible computer)
**ATAPI**. . . . . AT attachment packet interface
**BBS** . . . . . Bulletin board system
**BIOS** . . . . . Basic input/output system
**C** . . . . . Centigrade
**CD** . . . . . Compact disc
**CD-ROM** . . Compact disc read-only memory
**cm** . . . . . Centimeters
**COM** . . . . . Communication (as in communication port)
**CMOS** . . . . . Complementary metal-oxide semiconductor
**DC** . . . . . Direct current
**DMA** . . . . . Direct memory access
**DPMS** . . . . . Display power-management signaling
**DRAM**. . . . . Dynamic random access memory
**DSTN** . . . . . Double layer super twist nematic
**ECP** . . . . . Extended capabilities port
**EPP** . . . . . Enhanced parallel port
**g**. . . . . gram
**G** . . . . . Gravity
**GB** . . . . . Gigabytes
**hr** . . . . . hour
**Hz** . . . . . Hertz
**IDE** . . . . . Integrated drive electronics
**I/O** . . . . . Input/output
**IRQ** . . . . . Interrupt request line

**ISA** . . . . . Industry Standard Architecture
**KB** . . . . . Kilobytes
**kg** . . . . . Kilograms
**LAN** . . . . . Local-area network
**lb.** . . . . . Pounds
**LBA** . . . . . Logical block addressing
**LCD** . . . . . Liquid-crystal display
**m** . . . . . Meters
**mA** . . . . . Milliampere
**mAhr** . . . . . Milliampere hour
**MB** . . . . . Megabyte
**mm** . . . . . millimeter
**MPEG** . . . . . Motion Picture Experts Group
**MPU** . . . . . Microprocessor unit
**ms** . . . . . Millisecond
**PDF** . . . . . Portable document format
**PC** . . . . . Personal computer
**PCI** . . . . . Peripheral component interconnect
**PCMCIA** . . . Personal Computer Memory Card International Association
**POST** . . . . . Power-on self-test
**PNP** . . . . . Plug and play
**PS/2** . . . . . Personal System/2
**RAM** . . . . . Random-access memory
**ROM** . . . . . Read-only memory
**SVGA** . . . . . Super video graphics array
**TFT** . . . . . Thin-film transistor
**USB** . . . . . Universal serial bus
**V** . . . . . Volt
**VAC** . . . . . Voltage alternating current
**VCC** . . . . . Voltage collector current
**VDC** . . . . . Voltage direct current
**whr** . . . . . Watt hour

# Glossary

**AC adapter**

The AC (or alternating current) adapter regulates current coming into your computer from the wall outlet. The current at the wall outlet is alternating current and needs to be changed by the adapter to DC (direct current) before your computer can use it for power.

**ACPI**

ACPI (Advanced Configuration and Power Interface)- a method for describing hardware interfaces in terms abstract enough to allow flexible and innovative hardware implementations and concrete enough to allow shrink-wrap OS code to use such hardware interfaces.

**BIOS**

BIOS stands for basic input/output system. The BIOS is software (often called firmware) that is independent of any operating system. It enables the computer to communicate with the screen, keyboard, and other peripheral devices without using programs on the hard disk.

The BIOS on your computer is flash BIOS, which means that it has been recorded on a flash memory chip that can be updated if needed.

**Boot**

To start your computer. A cold boot resets the entire computer and runs through all computer self-tests. A warm boot clears out computer memory only.

**Boot disk**

A disk containing operating system programs required to start your computer. A boot disk can be a floppy disk, hard drive, or compact disc.

**Byte**

The basic unit of measure for computer memory. A character—such as a letter of the alphabet—uses one byte of memory. Computer memory is often measured in kilobytes (1,024 bytes) or megabytes (1,048,576 bytes).

Each byte is made up of eight bits. For more information on bytes and bits, see an introductory book on computers.

**Cache memory**

Cache is very fast, zero-wait-state memory located between the microprocessor and main memory. Cache reduces the average time required by the microprocessor to get the data it needs from the main memory by storing recently accessed data in the cache.

**CardBus**

CardBus technology enables the computer to use 32-bit PC Cards. Hardware in the computer and the Windows operating system provide support for the 32-bit cards. The voltage of 32-bit cards (3.3 volts) is lower than that of 16-bit cards (5 volts). The 32-bit cards can transmit more data at a time than the 16-bit cards, thus increasing their speed.

**CMOS memory**

CMOS (complementary metal oxide semiconductor) memory is powered by the CMOS battery. The System Setup settings and other parameters are maintained in CMOS memory. Even when you turn your computer off, the information in CMOS memory is saved.

**COM port**

COM stands for communication. COM ports are the serial ports in your computer.

**Compact Disc**

A compact disc (CD).

**Conventional memory**

The first 640 KB of system memory. Operating systems and application programs can directly access this memory without using memory-management software.

**Disk**

The device used by the computer to store and retrieve information. *Disk* can refer to a floppy disk, hard disk, or RAM disk.

**Disk cache**

A software device that accumulates copies of recently used disk sectors in RAM. The application program can then read these copies without accessing the disk. This, in turn, speeds up the performance of the application.

A cache is a buffer for transferring disk sectors in and out of RAM. Data stored in a disk cache is a copy of data already stored on the physical disk.

**DMA (direct memory access)**

A method of transferring data from a device to memory without having the data pass through the microprocessor. Using DMA can speed up system performance.

**DPMS**

Display Power Management Signalling. Displays or monitors that comply with this can be managed by the Power Management features found in the system setup.

**Floppy disk**

A removable disk, also called *floppy* or *diskette*.

**Hard drive**

Also called *fixed* disk. A hard drive is connected to the computer and can be installed or removed. Data written to a hard drive remains until it is overwritten or corrupted.

The 2.5-inch hard drive in your computer was designed for use in a notebook computer. Because hard drives in notebook computers are smaller than those in desktop computers, their maximum storage capacity may be less than that of desktop hard drives. However, because of their smaller size, the drives handle shock and vibration better than larger drives, which is important for a notebook computer.

**I/O**

Input/output. Refers to peripheral devices, such as printers, that are addressed through an I/O address.

**I/O address**

I/O stands for input/output. Peripheral devices, such as printers, are addressed through the I/O port address.

**IRQ (interrupt request line)**

The IRQ is a hardware line that a device uses to signal the microprocessor when the device needs the microprocessor’s services. The number of IRQs is limited by industry standards.

**LCD (liquid-crystal display)**

The LCD screen on your computer differs from the display screen of a desktop monitor. Most desktop monitors use CRT (cathode-ray tube) displays, which work by moving an electron beam across phosphor dots on the back of the screen. The phosphor dots light up to show the image. LCDs use a liquid-crystal solution between two sheets of polarizing material. Electric current passing through the liquid aligns the crystals so that light can or cannot pass through them, creating an image.

**MB (megabyte)**

1,024 kilobytes.

**Megabit**

1,048,576 bits or about 128 kilobytes.

**Operating system**

A program that supervises the computer's operation, including handling I/O. Application programs and users can request operating-system services. A user might request operation-system services to copy files or format a disk. An application program might use the operating system to obtain keyboard input, write data to a file, or write data to a screen.

**PC Card**

PC Card stands for personal computer card. The Personal Computer Memory Card International Association (PCMCIA) defines the standards used to develop all PC Cards. PC Card types include: modems, Ethernet adapters, SCSI adapters, ATA cards, and memory cards.

**PC slot**

The PC slot is the hardware slot in the computer where the PC Card is placed.

**Pixel**

A pixel is an individual dot in a graphic displayed on your computer. The pixels are so close together that they look as though they are connected. An LCD screen displays thousands or millions of pixels.

**Plug and Play**

A plug and play operating system automatically configures computer components to work with your system. With this type of operating system, you normally do not need to set jumpers on devices or set memory addresses or IRQs.

**RAM (random access memory)**

The computer's system memory, including conventional and extended memory. You can write to and read from RAM. Information stored in RAM is temporary, and is erased when the system is turned off.

**Refresh rate**

The refresh rate is the rate at which the image on the LCD screen is rewritten to the screen. A fast refresh rate helps keep the image from flickering.

**Resolution**

The resolution is the sharpness or clarity of the image on your LCD screen. Resolution is measured by the number of pixels the computer’s screen can display. For example, a resolution of 800 x 600 means that the screen can display 800 pixels in row and can display 600 rows. The more pixels displayed, the higher the resolution and the better the image.

**ROM (read-only memory)**

Permanent computer memory dedicated to a particular function. For example, the instructions for starting the computer when you first turn on power are contained in ROM. You cannot write to ROM. (ROM is not the same as RAM).

**Sector**

Also known as *disk sector*. The portion of a track that is numbered and can hold a specified number of characters (usually 512 KB).

**Shadow RAM**

A write-protected area of RAM that contains a copy of the BIOS. As the computer boots, the BIOS is copied from its permanent location in ROM to RAM. The BIOS can be executed much faster in RAM than in ROM. The BIOS remains in shadow RAM until you turn off the computer.

**TFT (thin film transistor) LCD**

A TFT LCD uses a separate transistor circuit to control each pixel. This technology provides the best resolution for an LCD screen. A TFT LCD is also sometimes called an active matrix LCD.

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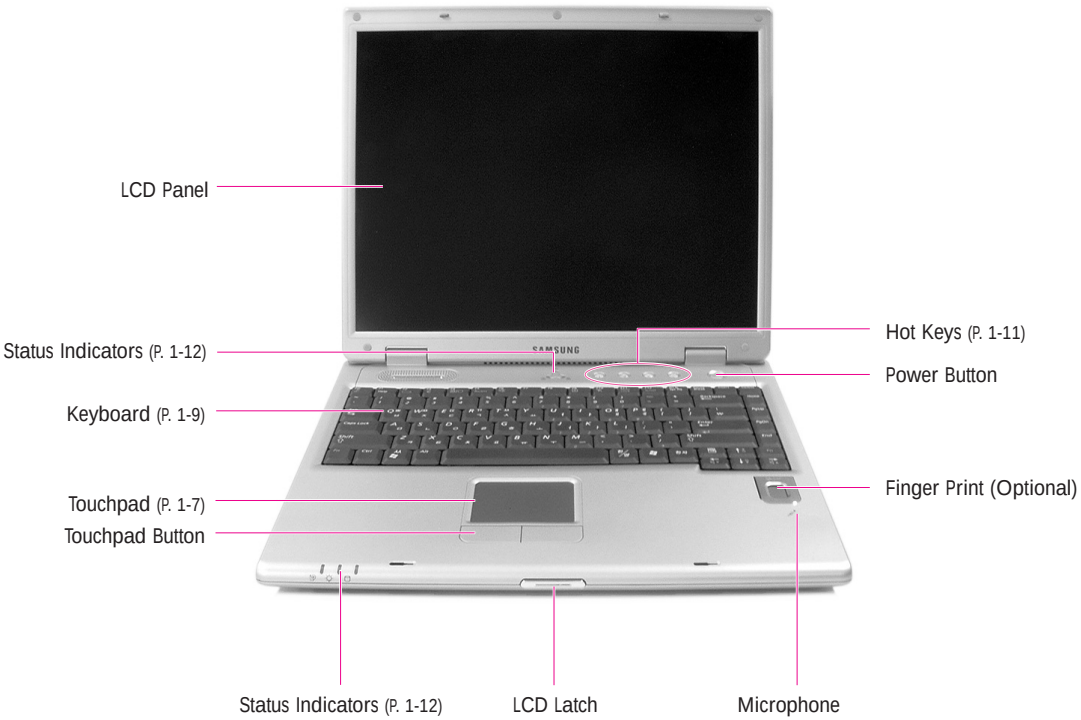
# Chapter 1

## Getting Started

This chapter provides basic information for using this computer. System overview and methods for general use are provided.

# Introducing The Computer

## Front View

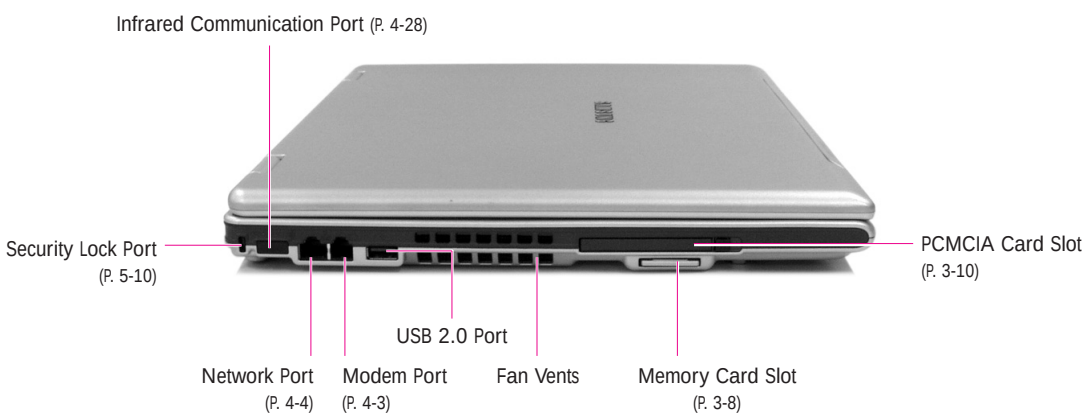



**Note** The Fingerprint Identification System is optional.
See also the appropriate user's guide to find more information.

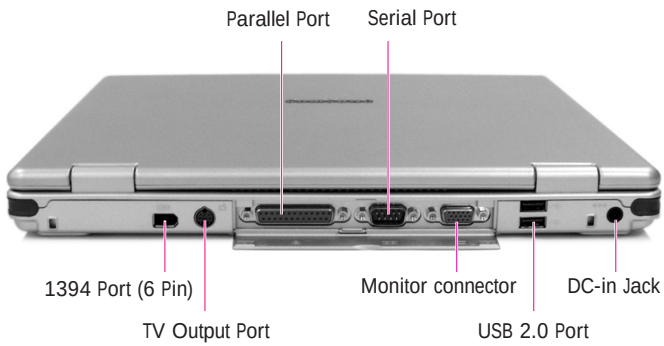
## Right View

**Note** You can install various other multi-bay devices in the multi-bay of the system. For procedures to replace the multi-bay device, refer to **Chapter 3. Using Multi-Bay.**

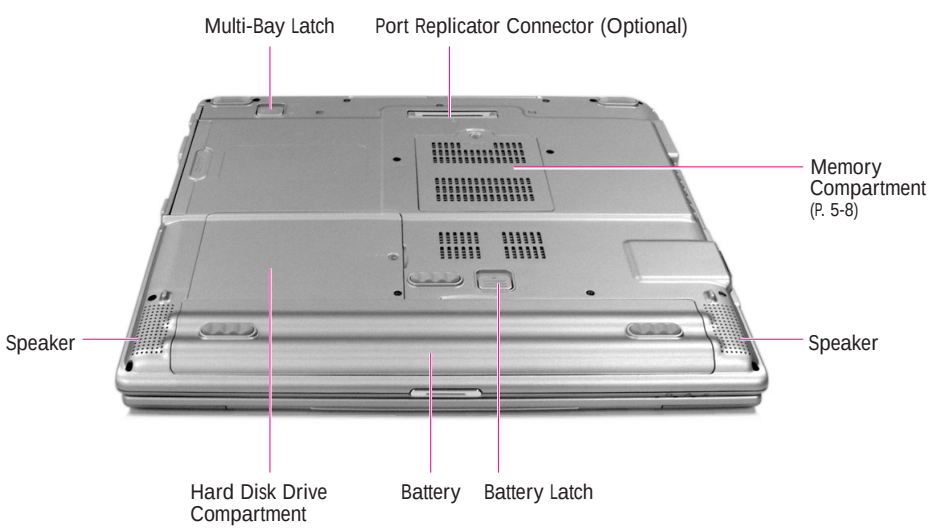
## Left View


Infrared Communication Port (P. 4-28)
Security Lock Port (P. 5-10)
PCMCIA Card Slot (P. 3-10)
USB 2.0 Port
Network Port (P. 4-4)
Modem Port (P. 4-3)
Fan Vents
Memory Card Slot (P. 3-8)

## Rear View




## Bottom View

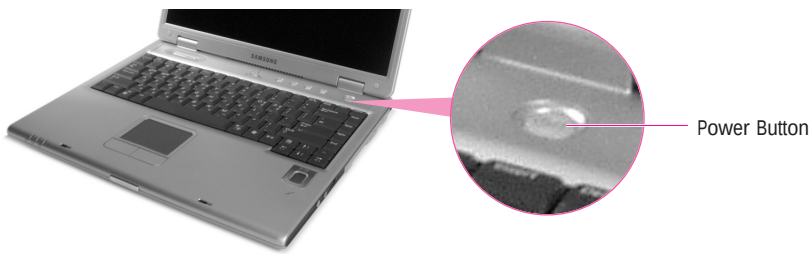



**Caution** Removing or disassembling the hard disk drive will void your warranty. To replace the hard disk drive, please contact your nearest Samsung Service Centre.

# Turning the Computer On and Off

## Turning On

1. Insert the battery and connect the power according to the supplied Installation Guide.
2. Lift up the LCD panel and open it to a comfortable angle.
3. Press and then release the power button to turn the system on.




## Turning Off

1. Click the **Start** button on the Taskbar.
2. Select **Turn Off Computer**.
3. Click **Turn Off** from the [Turn Off Computer] window.

**Caution** If the system is not turned off properly due to a system error, press and hold the power button for more than 4 seconds to turn the system off. After doing so, when you turn the system on, the system examination program is executed automatically.

# Creating and Changing User Accounts

Multiple users can be registered in a single system so that each user may use their own customized working environment. Procedures to register and change user accounts are provided below.

## Registering a new user

1. Click **Start** > **Control Panel**.
2. Click **User Accounts** > **Create a new account**.
3. Type a name for the new account, and click **Next**.
4. **Select the account type** and click **Create Account**.
   The new user account has been created.

## Changing users

1. Click **Start** > **Log Off**
2. Click **Switch User**.

3. In the [Windows Log On] window, select the desired **user name**.

**Note**

**To delete a user account**

1. Click on a user account to delete and click **Delete the account**.
2. Select either **Keep Files** or **Delete Files**, and then click **Delete Account**.

# Touchpad

Movement of the pointer (arrow) on the screen will correspond to movement made with a finger on the touchpad.

**Touchpad buttons**
the two buttons below the touchpad provide identical functions to buttons of a mouse.

**Note** **Locking the touchpad**

You can lock the touchpad and use only the keyboard and mouse. To lock the touchpad function, press the **<Fn>+<F9>** key combination.

## Click (Select Function)

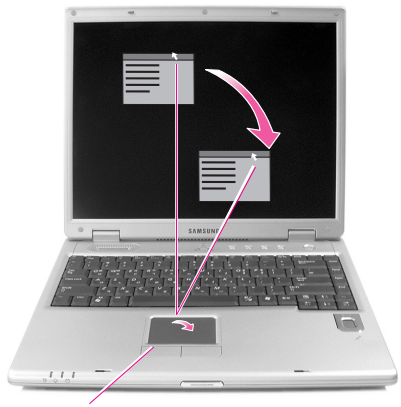
Place a finger on the touchpad, move the pointer on the screen to the icon or item to select, and tap the touchpad once. The click operation is also used to move the 'cursor' during document operations.

## Double-click (Run Function)

Place a finger on the touchpad, move the pointer on the screen to the item to run, and quickly tap your finger on the touchpad twice.
Or double-click the left touchpad button.

## Drag (Move / Select)

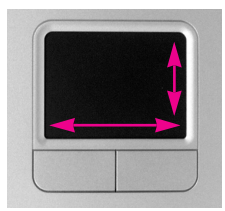
Drag and drop a part to the required place.



**This button is held down**
Place the touchpad pointer on the title bar of the window.

## Using the Touchpad Scroll Function

The touchpad has a scroll function, which can be used like the wheel dial of a wheel mouse. Move up and down along the right edge of the touch pad (scrolling up and down) or left and right along the bottom edge of the touch pad (scrolling left and right) to scroll the screen. However, this may not apply to some programs.



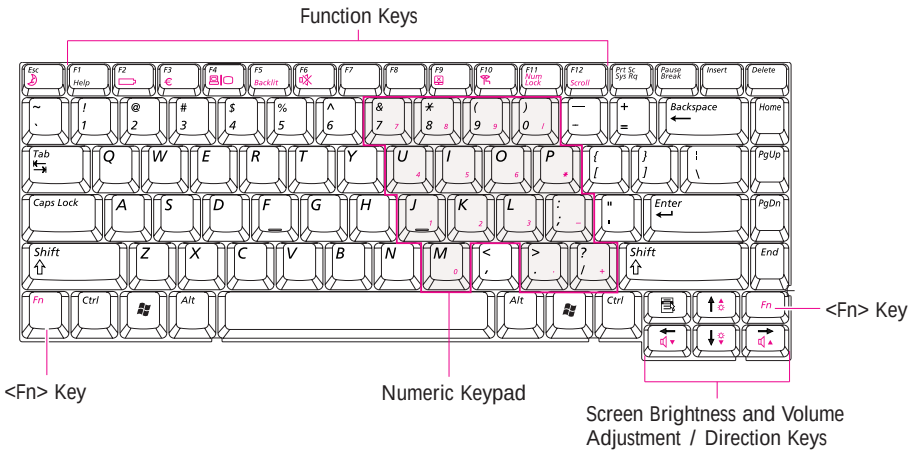
**Caution**

- Please use the touchpad only with your finger. Using sharp devices may damage the touchpad.
- Operating the touchpad or touchpad button while starting your system may increase the time required for starting Windows.

**Note**

- To utilize the touchpad buttons for other more diverse functions, please refer to the Mouse icon in the Control Panel.

# Using the Keyboard

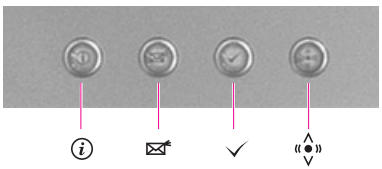



## Special Function Keys: The <Fn> key activates special functions when pressed in combination with other keys.

| Fn + Key Combinations | Key Name | Function |
|---|---|---|
| Esc | Power Saving Mode | Puts the computer into power saving mode. To use the computer again, press the power button. |
| F2 | Gauge | You can check the power supply, the battery charge, the wireless LAN, and the volume status. |
| F3 | Euro | Used to type the symbol for Euro currency. |
| F4 | LCD/CRT | Switches the display between the LCD and external display device when an external display device is connected. (P. 6-8) |
| F5 | Backlit | Turns the LCD on and off. |
| F6 | Mute | Turns the audio output on and off. |
| F9 | Touchpad | Turns the touchpad function on and off. |
| F10 | Low-noise | The system operates in low-noise mode. |
| F11 | Num Lock | Enables the numeric keypad. |
| F12 | Scroll Lock | Scrolls the screen up and down while the cursor position does not change in some applications. |
| F8 | LCD Brightness Up | Makes the LCD screen brighter. |
| F7 | LCD Brightness Down | Makes the LCD screen dimmer. |
| ← | Volume Down | Decreases the audio volume. |
| → | Volume Up | Increases the audio volume. |

| Key | Function |
|---|---|
| | **Gauge**<br>You can check the power supply, the battery charge, the wireless LAN, and the volume status.<br>• **Power Supply Status**<br> When operating on AC power When operating on battery power<br>• **Remaining Battery Charge Level**<br> <br>• **Wireless LAN Status**<br> Wireless LAN Enabled Wireless LAN Disabled<br>• **Volume Status**<br> Sound On Mute |
| | **Screen Adjustment Key**<br>Moves up and down pages, or moves the cursor to the start or end of a line. |
| | **Windows key**<br>Display start menu. |
| | **Application Key**<br>Provides the right button function of the touchpad. |
| | **Low-Noise Mode Key**<br>Pressing the low-noise mode button lets your computer operate in low-noise mode. To return your computer to normal mode, press the button again.<br>**Caution** In low-noise mode, the operational speed of a program may be slowed down because the CPU operates at minimum speed, and the system may overheat because the fan is rotating only at low speed.<br>**Note** The Celeron-M CPU does not support low noise mode by using the keyboard. |

# Hot Keys



**Internet key** : Runs Internet Explorer.

**E-mail key** : Runs the Internet e-mail client program (Example: Outlook Express).

**User Button (User 1)** : You can launch a frequently used program by pressing the button. By default, Windows Calculator is configured to be launched when you press this button.

**WLAN/Bluetooth or User 2 Button** : Turns on and off the wirelessLAN/Bluetooth function for the models with wireless LAN/Bluetooth function. Launches a user defined program for the models without wireless LAN/Bluetooth function.

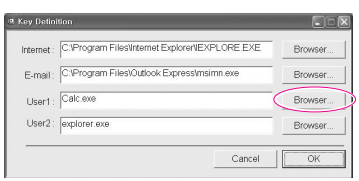
**Note** **About the Wireless LAN Button**

Turning the wireless LAN on or off takes about 5 seconds. Pressing this button will not work for approx. 5 seconds after the last time the button was pushed.

## ■ Changing the Hot Key Settings

The following example shows how to change the setting of User 1 button

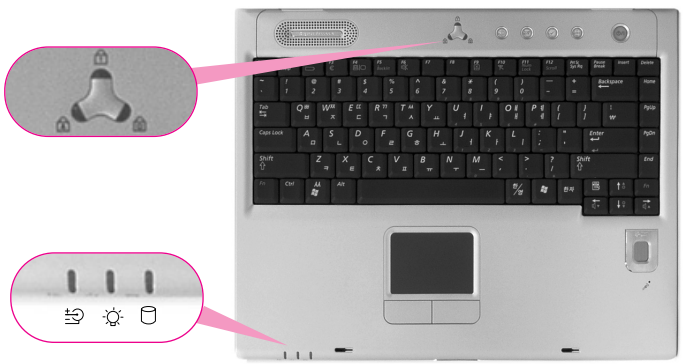
1. Double click the **Key Define Utility** icon( ) on the Taskbar.
2. Click **Browser** in the user field.




3. Select the desired program in [Open], and click **Open**. (Example, Windows Paint)
4. Click **OK** to save the configuration.

# Status Indicators

Shows the operating status of the computer.



| Icon | Name | Description |
|---|---|---|
| | Num Lock | Turns on when the numeric keypad is activated. |
| | Caps Lock | Turns on when all alphabet characters you type will be |
| | Scroll Lock | Turns on when it is set to scroll the screen up and down while the cursor position does not change in some applications. |
| | Charger | Turns blue - when the battery is fully charged, or when the battery is not installed.<br>Turns amber - when the battery is being charged.<br>Blinks - when the battery is not properly installed. |
| | Power | Turns on - when the computer is turned on.<br>Blinks - when the computer is in Standby mode. |
| | Hard disk drive | Blinks when the hard disk drive is in operation. |

# Adjusting LCD Brightness

There are 16 levels of LCD brightness (1:Dimmest~16:Brightest).

Press <**Fn**>+< [F7] > or <**Fn**>+< [F8] > keys from the keyboard to adjust LCD brightness. When changed, the current LCD brightness is displayed on the top left corner of the LCD screen for a few seconds.

(LCD Brightness Up)

(LCD Brightness Down

Whenever you turn the system on or change the power source the brightness level changes according to the settings.

- when operating on AC power : Brightness Level 16
- when operating on battery power : Brightness Level 2

**Note**

**Maintaining your LCD brightness settings after turning the system off and on**

1. Turn the system on. When the **Samsung Logo** appears, press the **<F2>** key to enter Setup.
2. In the **Boot** menu, change the **Brightness Control Mode** option to **User Control**.
3. Save the settings and exit Setup.

**To save the battery charge**

When your computer is operating on battery power, adjusting the LCD brightness level to dimmer diminishes the battery power consumption.

**Bad pixels in the LCD**

The limits of the LCD manufacturing technology allow a maximum of 10 abnormal or bad pixels, which do not affect system performance. This system may have the same level of abnormal or bad pixels as any other company's products.

**Caution**

**Maintenance Instructions**

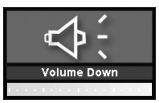
When cleaning the LCD panel, use only computer specific cleaners on a soft cloth, and lightly wipe in one direction.

# Adjusting the Volume

## To adjust using keyboard

Press <Fn>+< > or <Fn>+< > from the keyboard.
The changed volume level is displayed on the upper part of the screen for a few seconds

(Volume Up)

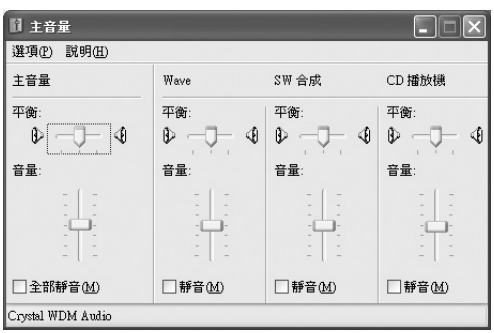


(Volume Down)

## Using the Volume Control Program

On the taskbar, click the **Volume** ( ) icon, and adjust the **slide bars**.

For advanced volume control options, double-click the **Volume** ( ) icon, and adjust the settings in the [Master Volume] dialog.




Caution : When you turn the system on, a booting noise may occur.

# Proper Seating Posture During Computer Use

The proper seating posture during computer use is provided here. Maintaining proper posture during computer use enhances performance and prevents physical bodily harm.

If necessary, use a footrest to raise the level of your knees and ease the pressure on the thighs.

### Seating Posture

- Position the chair so that the eyes are slightly higher than the display panel.
- Straighten the neck and back.
- Place the legs naturally.
- If necessary, use a cushion to provide extra back support.
- Avoid working postures that require twisting the body or neck.

### Lighting

- Soft, indirect lighting is recommended.
- Position the display panel so that external light does not reflect off the screen. Use curtains, if necessary.

### Work Habits

- Take periodic breaks and stretch out stiff muscles regularly.
- Look outside the window or at distant objects frequently to relieve strain on the eyes.

# Chapter 2

## Introducing Windows

This chapter provides basic information on using the computer's main operating system Windows.

# Windows XP Basics

Windows is the computer's main operating system, which needs to be familiarized with in order for efficiently computer use.

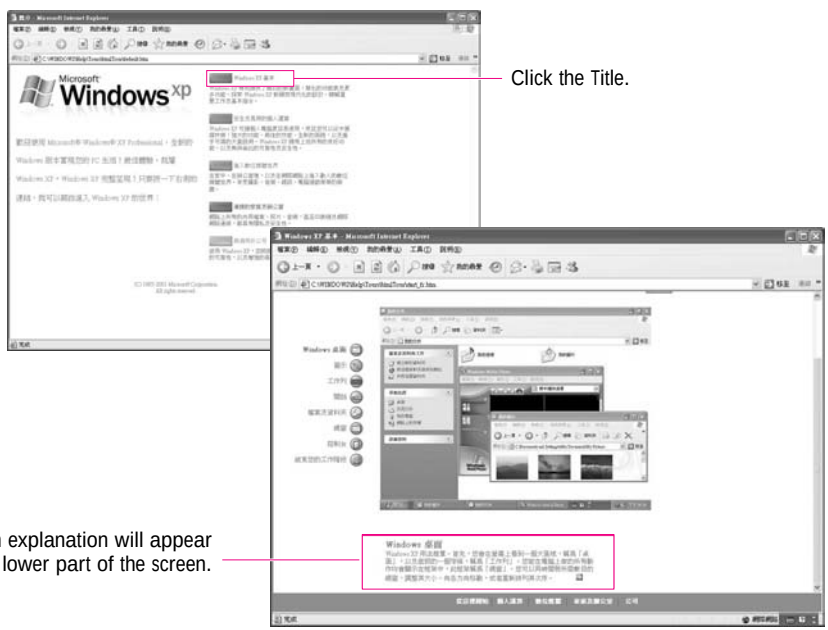
## Windows XP Tour

A tour of the elementary functions provided by Windows XP.

Click **Start** > **Tour Windows XP**.

Or click **Start** > **All Programs** > **Accessories** > **Tour Windows XP**.

Click on the topics to find out about important functions of Windows XP.



# Understanding the Desktop

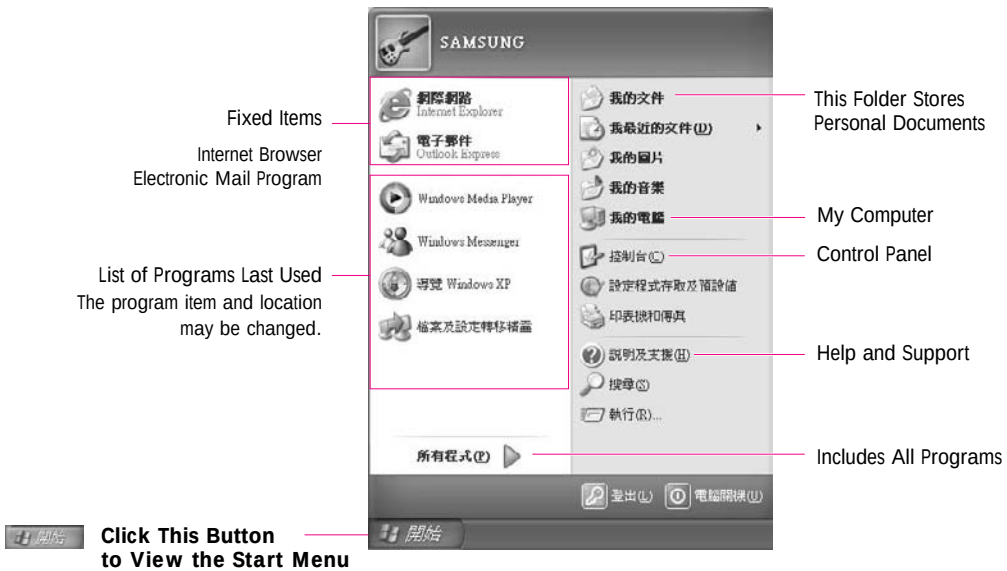
The Desktop is the working area on the computer. It consists of the large workspace, which is more or less the entire the screen and a Taskbar at the bottom.

| | | |
|---|---|---|
| Start Button | | Opens the Start Menu. |
| Taskbar | | Displays programs that are currently running. Frequently used icons can be placed here. |
| Recycle Bin | | Deleted files or folders end up here. |
| Language Bar | | Enables switching between English/other languages text inputs and provides other text input services. |

# Understanding the Start Menu

The Start Menu includes everything that is required to start Windows.

From the Start Menu it is possible to run a program, open a file, assign system users with the Control Panel, receive support by clicking Help and Support, and search desired items from computer or Internet by clicking Search.

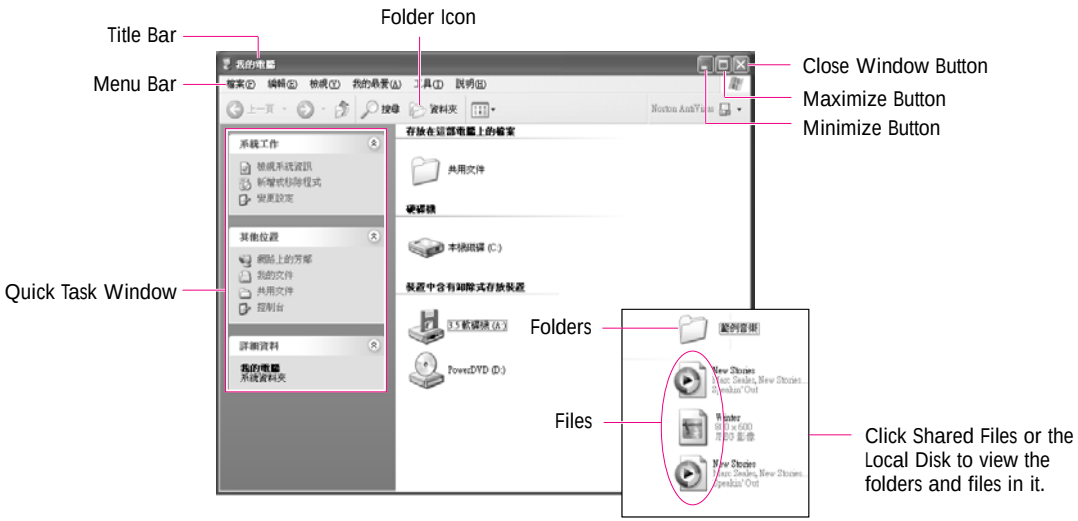



| | | |
|---|---|---|
| My Computer | | Displays the contents of the hard disk, the CD-ROM drive, the network drive, and floppy disks. It can also be used to search and open files and folders. |
| Control Panel | | Enables users to configure settings on the computer. |
| Help and Support | | Provides on-line help, information on Windows and troubleshooting. |
| Search | | Enables users to search for information in files or the Internet. |
| Run | | Runs programs or documents. |

# Understanding a Window

A window is the basic component in working with the computer. The My Computer window, which is a window for the computer's hard drive, will be used as an example here to show the basic composition of a window.

Click **Start** > **My Computer**.




Double-click the hard drive (local disk) to view internal folders and files stored in it. If the contents do not appear, click Show Contents.

**Note**

- **What is a Drive?** A storage device in which files and folders are saved in, and read from.
- **What is a Folder?** A folder is used to group and manage files systematically, and may include files in sub-folders. It is similar to a bookshelf.
- **What is a File?** A file is a document or various kinds of material that is generated as a result of program operation. It is also called data.

**To view the entire structure of the drive**

Click the Folder Icon in the Toolbar to view the entire structure. Click again to return to the Quick Task Window.

# Help and Support Center

Help and Support Center provides references and troubleshooting information regarding computer use.

Click **Start** > **Help and Support**.

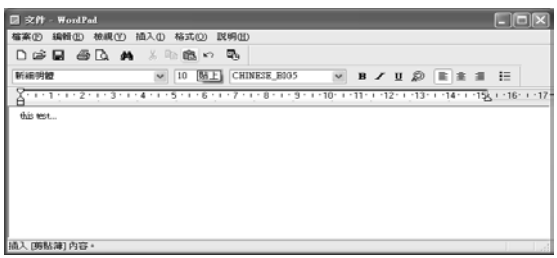
Displays Help Index
Related help information appears when a search keyword is entered.
Help Topics
Connect to Support Center. The computer has to be connected to the Internet
Computer information can be viewed and the problem can be diagnosed.
Troubleshooting Information
說明及支援中心
Windows XP Professional
選取一個說明主題
尋求協助
選擇一項工作
您知道嗎?

# Document Operations

To create documents, WordPad or NotePad, which is included in Windows, or a separate specialized word processor program can be used, such as MS Word.
Instructions for creating documents using WordPad is provided here.

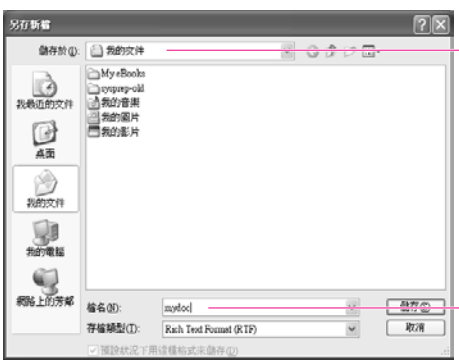
## Creating a New Document

1. Click **Start** > **All Programs** > **Accessories**> **WordPad**
2. Create and edit your document. For more information about WordPad, refer to on-line Help.



## Saving a Document

1. Select **File** from the Menu, and click **Save**.
2. Click on the Save in field to specify a folder to save the file in, enter the name of the file in the File Name field, and click **Save**.



## Opening a Document

1. Click **Start** > **All programs** > **Accessories** > **WordPad**.
2. Select **File** From the Menu, and click **Open**.
3. Click on the Look in field and specify the folder in which the file is saved.
4. Select the file to open and click **Open**.

## Printing a Document

To print a document, connect a printer to the computer.
For more information about connecting and configuring a printer, please refer to the printer manual.

To print a WordPad document

1. Turn on the printer, and insert paper.
2. Open the WordPad file to print.
3. Select **File** from the Menu and select **Print**.
4. Click **Properties**, adjust the printer options accordingly, and click **OK**.
5. In Print window, click **OK** to print the document.

# Chapter 3

## Using The Computer

This chapter investigates various different functions of the computer and provides information on using the related application programs for them.

# Using the CD-ROM Drive

This computer has one of the following CD drives.

| | |
|---|---|
| - DVD-ROM Drive | Reads a CD/DVD. |
| - CD-RW/DVD-ROM Combo Drive | Read a CD/DVD, and writes data onto a CD. |
| - DVD-Super Multi Drive | Reads CD/DVDs and writes data to CD/DVDs. Supported DVD types include DVD±R, DVD±RW and DVD-RAM. |

## To Run a CD

1. Press the eject button on right side of the CD drive.
2. When the tray slides out, place a CD onto it and push down until it clicks.

3. Push the CD tray in gently. The CD will run automatically.

**Note** To eject a CD when the CD drive is out of order or the system is turned off, unfold a paper clip, and insert the unfolded end of the clip into the hole ( ) and press until the CD tray opens.

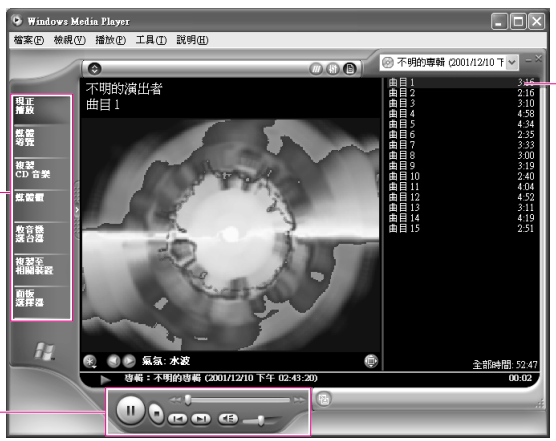
**Caution** To clean a CD or DVD title, clean the disc with a soft clean cloth by wiping from the center outwards.

Do not eject the CD while the Status Indicator is on.

# Using the Windows Media Player

The Windows Media Player enables the user to configure and play video and audio files from the computer or the Internet.

Click **Start** > **Windows Media Player**.
Or click **Start** > **All Programs** > **Accessories** > **Entertainment** > **Windows Media Player**.




Playlist pane

Features

Playback Controls area

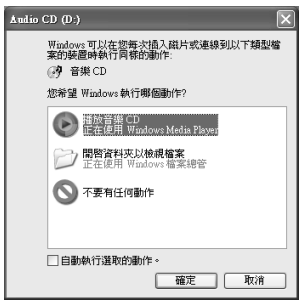
**Note** **Windows Media Player tour**

For more information about using the Windows Media Player, run the Windows Media Player and click Help > Help Topics

**Caution** If you maximize or restore down the window while playing a media such as an audio CD on Media Player, the screen may not displayed properly for a moment.

## To Play an Audio CD

1. Insert an audio CD into the CD drive, and a list of all available players is displayed automatically.
2. Select **Windows Media Player**, and click **OK** to play the audio CD.




## To Play a Video CD

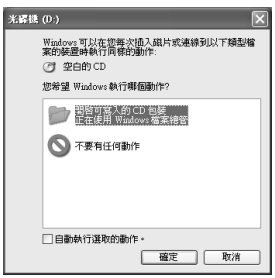
1. Insert a video CD into the CD drive.
2. When a video window appears, double-click the **MPEGAV** folder.
3. Double-click the **DAT** file.
4. When a warning window appears, click the **Open with** button.
5. In the new window, click **Select Program from List** and click **OK**.
6. Select the **Windows Media Player**, and click **OK**.
   The video will start playing.

# To Write Data in CD

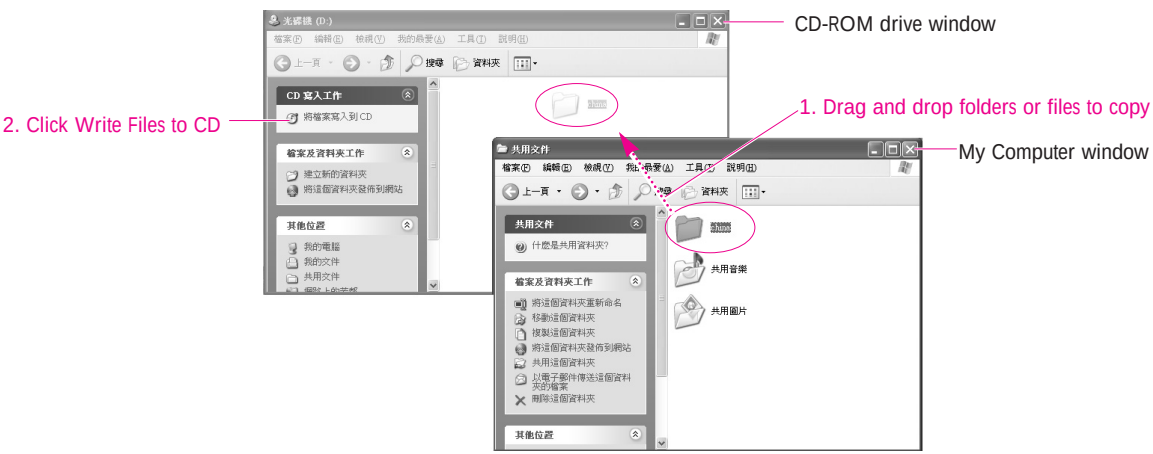
If your computer has CD-RW functionality, you can copy data to a blank CD or create an audio CD.

**Note** : An additional CD writing program is supplied in an additional CD.

1. Insert a blank CD into the CD-RW drive.
2. Click **Open Writable CD Folder** and click **OK**. The CD-ROM drive window appears automatically.




3. Click **Start** > **My Computer**.
4. Select, drag and drop folders or files to copy onto the CD-ROM drive window. Click **Write Files to CD** in the CD-ROM drive window.



5. When the CD Write Wizard appears, enter the **CD label**, and click **Next**. The data will begin copying.
6. When copying is completed, a 'completed' message will appear and the CD-ROM drive will open automatically.

**Note**

**For more information on copying CDs**

Click Start > Help and Support. Enter [CD copy] in the search field, and click the Search button.

**To create an audio CD**

Launch Windows Media Player and click **Help > Help Topics**.
[Using Windows Media Player > Using CDs > Creating your own CDs > To create your own CD].

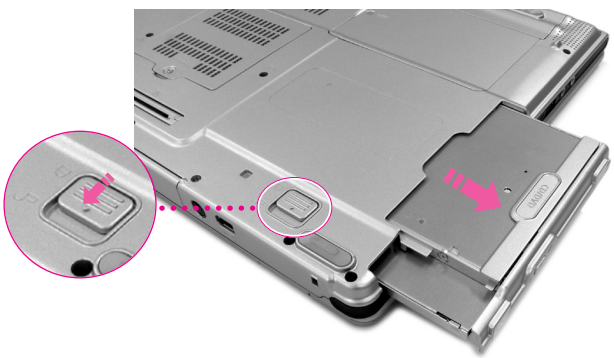
# Using the Multi-Bay

Multi-Bay provides space for CD drive installations. You can replace the CD drive with various other types of drives.The procedures to replace the drive installed in the Multi-Bay with other drives are described below.

주의 **Before Replacing the Multi-Bay**

Replace the Multi-Bay only after turning the computer off.

1. Turn off the computer.
2. While holding the Multi-Bay latch to the UNLOCK position, remove the installed drive.



3. Insert a new drive into the Multi-Bay completely, and make sure that the latch is in the LOCK position.

# Using Memory Card Slot

You can use a Memory Stick (or Memory Stick Pro) and a SD (Secure Digital) card using the memory card slot. You can use the Memory Stick and the SD card as removable disks and can use them to transfer data between your computer and any digital equipment such as a digital camera.

Memory Stick

Memory Stick Pro

SD (Secure Digital) Memory Card

**Caution** **Restrictions when Using Memory Sticks and SD Cards**

You can use Memory Stick, SD Memory Card and Memory Stick Pro (256MB~1GB, approximately 1 MB/s) for storing data only. Copyright protection function is not supported.

## ■ To insert and use a memory card

**Caution** Before using the memory card slot, remove the slot protector. Press the end of the slot protector softly to pop it outward, then remove it.

1. Insert the memory card into the memory card slot.

2. Click **Start > My Computer**. The inserted memory card is displayed.

3. You can write data to the memory card. If the memory card is not formatted yet, format the memory card before use.

**Caution** Since the memory card may be easily mislaid when moving your computer, keep the memory card separately.

## ■ To remove a memory card

1. Press the end of the memory card softly to pop it outward.
2. Remove the memory card.

## ■ To format a memory card

You can use a memory card after the format operation. The procedures to format a memory card are described below.

**Caution** Since format operation deletes all data in the memory card, please make sure that there is no important data in the memory card before formatting.

**Note** **To protect the data in the memory card**

Set the write protection tab of the Memory Stick or SD memory card to the Lock position.

1. Click **Start > My computer.**
2. Press the right touchpad button on the memory card drive, and select Format from the pop-up menu.
3. Click **Start** to start the format operation.

**Caution** To use a memory card in both the computer and other digital device such as digital camera, it is recommended to format the memory card in the digital device. If you format the memory card in the computer, you may have to format the memory card in other digital device again to use the memory card in the digital device.

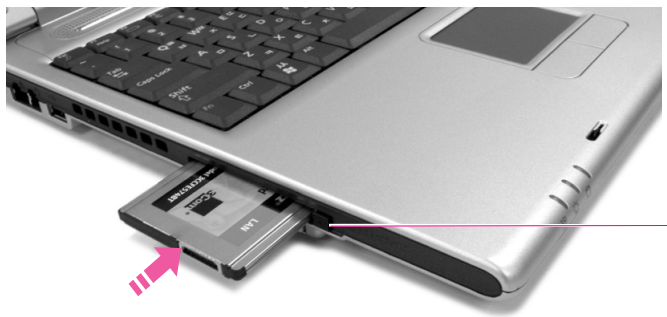
**Note** **To use a Memory Stick Duo**

Insert a Memory Stick Duo into the Memory Stick Duo adapter and insert the adapter into the Memory Stick slot of the computer.

# Working with PCMCIA Cards

Various different functions can be added by inserting PCMCIA cards into the system. This system supports 16/32 bit, type I or II PCMCIA card types.

1. Insert a card into the PCMCIA card slot on the side of the system.




2. When a card is inserted, Windows automatically installs the necessary driver for the card. If no available driver can be found by Windows, the driver has to be installed using the disk supplied with the card.

**Note**

**To remove PCMCIA card**

a. Double-click Safely Removes Hardware icon ( ) in Taskbar.
b. Select the appropriate PCMCIA card and click Stop button.
c. When 'Safe to remove Hardware' window appears, click OK.
d. Press Eject button at PCMCIA card slot once, then the button pops out.
e. Press the projected button to eject the PCMCIA card.

**Caution**

You cannot use a ZV card and a PCMCIA III card through the PCMCIA card slot of the system.

# Using EasyBox

Use EasyBox program to make use of Windows' complicated function easily andconveniently.

## Learn about EasyBox

Double-click the **EasyBox**( ) icon on the desktop. (Or select **Start > All Programs > Samsung > EasyBox > EasyBox**.)

- ▶ **System** : System management features are available, including disk defragmenter, removing unnecessary files/folders, computer scheduling and system recovery.
- ▶ **BIOS** : In windows-based mode, you can recover the BIOS defaults and change the boot sequence.
- ▶ **Desktop** : Desktop management features include changing the font size, executing a magnifier function, the start menu settings and managing the quick launch icons on the taskbar.
- ▶ **Security** : Here you can configure the security settings supported by Windows XP SP2. And you can change the configuration of the firewall settings, Windows automatic updates and blocking pop-ups when connected to the Internet.
- ▶ **Plus Tip** : This is a collection of additional Windows functions that are useful for system management. (Offering shortcut descriptions of Windows, configuring network sharing and opening local folder sharing, etc.)

# Using EasyBox

Security management function will be used as an example here to show the function of Easybox

## Configuring Firewall

The Windows Firewall prevents unauthorized users from gaining access to your system via the network or the Internet.

1. Click **Start > All Programs > Samsung > EasyBox > EasyBox**.
2. Click **Security** from the top menu bar.
3. Select **Windows Firewall Settings** from the Security menu on the left.
4. Select a firewall level.
5. Click **Apply**.

Click the User Setting button for advanced features, including exceptions and permissions.

# Using Samsung Smart Screen

Use Samsung Smart Screen program to arrange desktop icons as desired and manage them effectively.

1. Click **Start > All Programs > Samsung > Samsung Smart Screen**.

**Note**

When you launch Samsung Smart Screen for the first time, a dialog box asking whether to register the program as a start program or not appears. If you select OK, the program is automatically launched when you start your computer.

2. Samsung Smart Screen appears. When you run the program for the first time, water drop image is displayed.

Click a water drop to open and close the group.

3. To move an icon, click a water drop to open it, then drag an icon to another water drop.

**Note**

**To return to Windows desktop**

Right-click on Samsung Smart Screen and click Windows desktop. Windows desktop is displayed.

To return to Samsung Smart Screen, double-click ( ) icon on the taskbar.

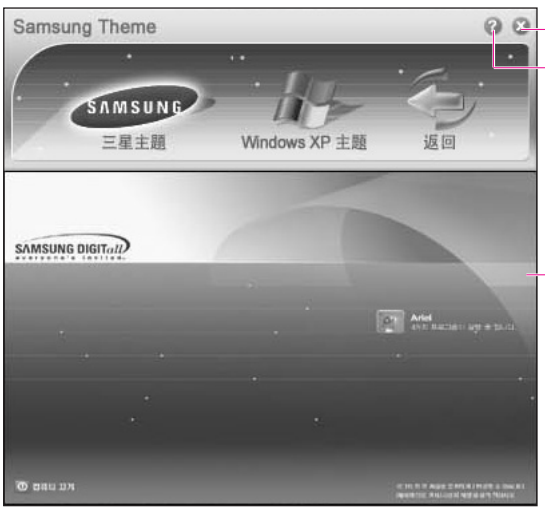
**To change background or skin**

Right-click on Samsung Smart Screen and select desired item.

# Using Samsung Theme

Samsung Theme is a program that enables a user to easily switch a theme (desktop, logon screen and sound effect).

Double-click the **Samsung Theme** ( ) icon on the desktop.
(Or select **Start > All Programs > Samsung > Samsung Theme > Samsung Theme**.)




Help button

Close button

Move the mouse pointer over Samsung Theme item, then the Samsung Theme will be displayed below.

▶ **Samsung Theme** : Switches to Samsung Theme (desktop, logon screen and sound effects on booting).

▶ **Windows XP Theme** : Switches to the Windows XP default Theme.

▶ **Back** : Restores the theme to its previous status.

# Using Samsung Update Plus

Samsung Update Plus is software that examines and updates Samsung software and drivers installed on your Samsung computer to the latest version. To use Samsung Update Plus, your computer has to be connected to the Internet.

## To Update Samsung Software and Drivers

1. Select **Start > All Programs > Samsung > Samsung Update Plus > Samsung Update Plus**.

**Note** If this is the first time you are running the program, a window will appear asking you if you agree to the agreement in the window. Click Agree to use this software.

2. Click **Search for and Install Updates** and click the **Search for Updates** button.

3. If there are available software or driver updates for your computer, the available updates will be listed. Select the required updates from the list and click Install Update to start the update.

Update List

(The update list on the screen may differ depending on the computer model.)

**Note**

**Updates that must be installed separately.**

If you select an update that must be installed separately, a message appears informing you of this. Follow the instruction message to correctly install it.

**Automatic update items display**

By default, your computer is configured to automatically search for updates. If there is a new update available, this is notified in the notification area. Click the balloon help icon in the notification area. Here you will be able to find the latest available updates.

To change the automatic update settings, click the Custom button in Figure 2 and change the settings.

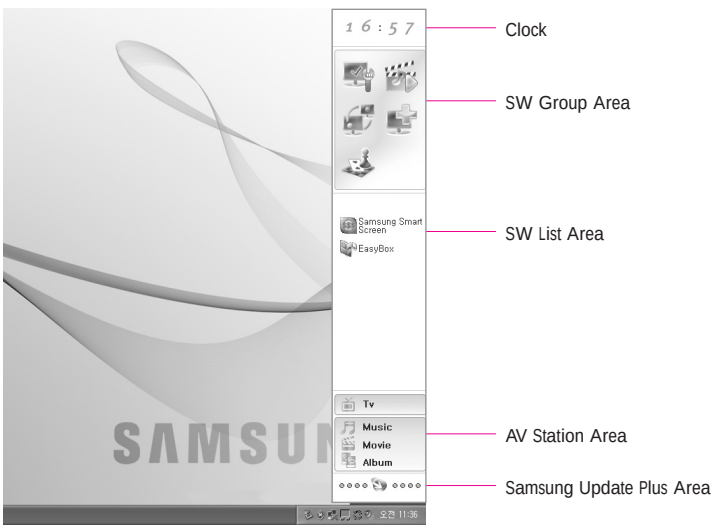
: Samsung Update Plus does not provide updates for additionally installed software and device drivers.

# Using Samsung Command Center

Samsung Command Center is a program that enables the easy management of software provided for a Samsung computer. You can view brief descriptions of some programs and you can launch the programs directly. Samsung Command Center is always hidden automatically and it appears when you place the mouse cursor in the right-most position.

**Select Start > All Programs > Samsung > Samsung Command Center > Samsung Command Center**

The Samsung Command Center screen consists of the following 4 areas.




▶ **S/W Group Area** : You can classify programs into 5 groups, these being System, Utility, Network, Support, and Entertainment and manage them.

You can add a file that can be launched directly from the Desktop or Explorer (Files that have the extension of .cmd, .bat, .pif, .scf, .exe, .com, .lnk, or .scr ) by dragging and dropping them.

▶ **S/W List Area** : Shows software included in the S/W group.
You can add a file that can be launched directly from the Desktop or Explorer by dragging and dropping it. Some Samsung software is automatically added or removed from the list when the software is installed or removed. If you move the cursor over the software in the list, you can view a brief description and the Run button to launch.

▶ **AV Station Area** : This only appears when the AV Station program has been installed.
You can easily launch the TV, music, movie or album player of the AV Station program. Drag and drop a media file from the Desktop or Explorer over any of the buttons to launch the corresponding player.

▶ **Samsung Update Plus Area** : When there is new software or a new driver, the Samsung Update Plus notification window appears.
If you click on the notification window, Samsung update Plus is launched and an update is performed with a percentage number indicating the progress status.

# Chapter 4

## Connecting to the Internet

This chapter provides instructions on connecting to the Internet.

# Connecting to the Internet

The following options show many ways to connect to the Internet.
An appropriate option should be selected depending on the user's working environment and the user's system specifications.

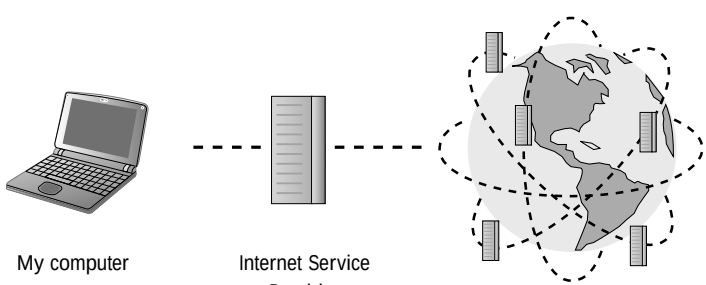
**Option 1 Connecting using a modem and a telephone line.**
Service has to be applied for and received from an Internet Service Provider (ISP) through an Internet service account.

**Option 2 Connecting using a High-speed communication network service, such as ADSL and VDSL.**
Service has to be applied for and received from a High-speed communication network service provider. Receiving Internet service may require support from specific devices.
Contact the service provider for details.

**Option 3 Connecting using a wired LAN**
Use a LAN cable that is already installed in your office or building,

**Option 4 Connecting using a wireless LAN**
The Internet can be accessed without a telephone line or a LAN cable if there is a Wireless LAN AP (Access Point) nearby.

**Note** : The Wireless LAN function is optional.



# Connecting to the Internet Using a Modem

1. Connect the telephone line to the modem port. Do not use a digital telephone line.

2. To connect the modem to the Internet, and use e-mail, you have to apply to an Internet Service Provider (ISP) for an Internet service.

**Note**

- For more account information, please contact your ISP.
- Ask your ISP about Internet fees and the disconnection procedure. If the Internet connection is not disconnected properly, additional telephone charges may incur.

# Configuring the Network Environment Settings for Wired LAN Connections

A wired LAN environment is an environment where you can connect to the Internet using the company's LAN or with a broadband modem.

1. Connect the network (LAN) cable to the LAN port of the system.

2. Click **Start** > **Control Panel**.
3. Select **Network and Internet Connections** in the [Control Panel] window.
4. Click **Network Connections** in the [Network and Internet Connections] window.
5. In the [Network Connections] window, point the mouse pointer to Local Area Network and click the right touchpad button. Select **Properties** from the popup menu that appears.

6. In the General tab of the [Local Area Connection Properties] window, check that the connecting device field includes the **Broadcom 440x 10/100 Integrated** driver.

7. In the “This connection uses the following items” field, select **Internet Protocol (TCP/IP)**, and click **Properties**.

**Note** In the above screen, necessary network components can be added by clicking the Install button.

8. Enter the system’s IP and DNS server addresses on the General tab of the [Internet Protocol (TCP/IP) Properties] window. If DHCP is used, click “Obtain an IP address automatically” and “Obtain DNS server address automatically” on the General tab.

**Note** IP addresses and other information necessary for configuration can be obtained from the network administrator.

9. Once all of the information is entered in the [Internet Protocol (TCP/IP) Properties] window, click **OK** to finish.

# Using Samsung Network Manager

Use Samsung Network Manager to configure network setting.

Using the program, you can do the following.

- You can save network settings (including IP address) according to network places such as office and home. When you change places, simply select a network place and the network settings will be automatically changed accordingly.
- You can easily find out your current IP.

## To configure network setting

1. Connect LAN cable to the computer's LAN port.
2. Double-click Samsung Network Manager icon on the desktop.

   Or click **Start > All Programs > Samsung Network Manager > Samsung Network Manager**.
3. When you are using DHCP, available IP's are displayed in the status dialog box. Click **Change**.

4. Click **Add**, click **Choose Icon** and select an icon. Enter a place name in **New Name** field and click Ok.

5. New place icon is displayed and full dialog box appears. Check your IP and click **Close**. Network setting is saved.

**Note**

To configure network setting of some place other than current place, click the place icon and configure each network device. If you are using DHCP, select 'DHCP' check box and click Save.

If you are using a static IP, clear 'DHCP' check box, enter appropriate network setting and click Save.

Ask ISP or network administrator for IP address.

## To change network places

You can change network places as below.

1. Connect LAN cable to the computer's LAN port, and double-click **Samsung Network Manager** icon on the desktop.

**Note**

If you used static IP in previous place, previous static IP is displayed in the status dialog box.

2. Click **Change**, select a place icon then click **Change**.

3. On "Do you want to change the location setting?" dialog box, click Ok.
4. When the network place is changed, corresponding place icon is displayed in color and full dialog box appears. In the right area of full dialog box, network setting is displayed.
5. Click **Close** to close the dialog box.

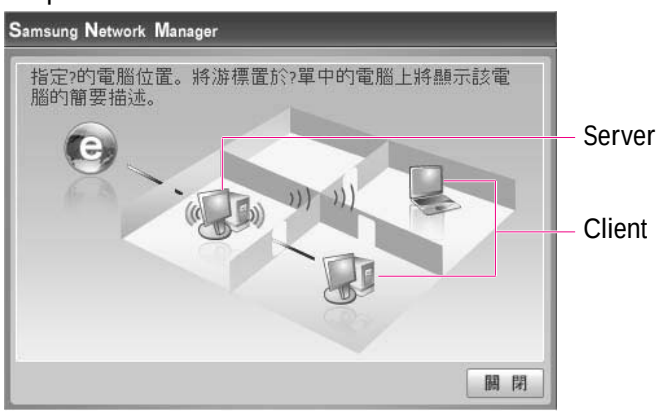
## To share an Internet connection,

Using Internet Connect Share, you can use the Internet by connecting to a computer connected to the Internet, even if your computer does not have a direct Internet connection.

You can setup the server, which is a computer directly connected to the Internet and which provides the Internet Connection Share service, and the client, which is a computer that will use the Internet Connection Share service.

### ▶ To configure the server,

1. Connect the network (LAN) cable and double-click the Samsung Network Manager icon on the Desktop.
2. Click **Click here to setup Internet Connection Share.**
3. The computers are represented by an icon. Click the server computer.




Select the location of your computer. Move the mouse point over a computer icon to view a brief description for that computer.

4. In the server, select a device that is directly connected to the Internet.

**Note**

If you select **Use Firewall**, you can use the Windows Firewall.
If you are using an external modem, select the network card connected to the external modem.

5. The network types connecting to the server and client will be displayed. Select a network type and then click **OK**.
6. Your configuration is displayed such as the Internet Connection, Use Firewall, Home Network Connection, etc. Confirm your configuration and click **OK** to begin the Internet Connection Share setup.
7. Configure the connection between the server and the client.
   If it is a wireless connection, the wireless network connection properties window and the wireless network setup procedure instruction window appear.
   Setup your wireless network according to the messages of the wireless network setup procedure instruction window.
8. The current location is represented as a server. The server configuration is complete.

▶ **To configure the client,**

1. Connect the network (LAN) cable and double-click the Samsung Network Manager icon on the Desktop.
2. Click **Click here to setup Internet Connection Share**.
3. The computers are represented by icons. Click the client computer.
4. Select a network to connect to the server and click **OK**.

   If it is a wireless connection, the wireless network connection properties and the wireless network setup procedure instruction windows will appear.

   Setup your wireless network according to the messages of the wireless network setup procedure instruction window.
5. The current location is represented as the client. The client configuration is complete.

# Using Both DHCP and Static IP Simultaneously

When you are alternatively using networks with either DHCP or static IP addressing, you can use alternative settings that enable simultaneous configurations of DHCP and static IP to use both of the network connections without reconfiguring.

**Note** : This function is provided only when your operating system is Windows XP.

1. Click **Start > Control Panel > Network and Internet Connections > Network Connections > Local Area Connection**, press the right button of the touchpad, and then select Properties.
2. Select the **Internet Protocol (TCP/IP)** item, and then click **Properties**.
3. In the **Alternate Configuration** tab, click **User configured**, and then enter the appropriate values for the following:

   (IP address, Subnet mask, Default gateway, Preferred and alternate DNS server, Preferred and alternate WINS server)

4. When the configuration has been completed, click **OK**.
   Now you can connect to both networks using DHCP and static IP respectively.

# Configuring the Network Environment Settings for Wireless LAN Network (WLAN)

A wireless network (Wireless LAN) environment is a network environment that enables communication between multiple computers at home or a small-size office through wireless LAN devices.

When a computer-to-computer network has been constructed, a computer that is not connected to the Internet can share the Internet by accessing another computer connected to the Internet. (See P. 4-8. 'To share an Internet Connection')

**Note**

The description in this section refers to the Intel(R) PRO/Wireless 2200BG Network Connection (hereafter referred to as an 11g card) and the Intel(R) PRO/Wireless 2915ABG Network Connection (hereafter referred to as an 11a/g card) device.

To view the installed wireless LAN card, click Start > Control Panel > Performance and Maintenance > System > Hardware tab > Device Manager.

The actually displayed images may differ from the figures shown in this section according to the installed device and the connection state, and the supported cards may differ depending on the system model.

The connection configuration procedures will be described for a computer with Windows XP Service Pack 2. For procedures to configure a wireless network using the wireless LAN setup program supplied by the wireless LAN card manufacturer, refer to P.4-17 'Wireless Network Setup Using the Wireless LAN Setup Program'.

To use the wireless network, you have to turn on the wireless LAN function by using the Wireless LAN On/Off Button. (See P. 1-11)

Wireless network connections can be classified into two categories.

## 1) Access Point

You can connect to an AP to use the network. This is possible only in an environment equipped with an AP. (See P. 4-12, 'Connecting to an Access Point (AP)')

**Note**

**What is an Access Point (AP)?**

An AP is a network device that bridges wired and wireless LANs, and corresponds to a wireless hub in a wired network. You can connect multiple wireless LAN installed computers to an AP.

## 2) Computer–to-computer (ad hoc)

This is also called a peer-to-peer network.
In computer-to-computer wireless networks, you can wirelessly connect 2 or more computers that have wireless LAN modules. (See P. 4-13, 'Connecting to computer-to-computer networks (peer-to-peer or ad hoc)').

# Connecting to an Access Point (AP)

This section describes how to connect to an AP. You can use the network when you are connected to an AP.

**Note** For more detailed information such as the network key (encryption key), ask your network administrator.

1. Right-click on the **Wireless Network Connection** ( ) icon on the taskbar, and select **View Available Wireless Networks**.

2. Select an AP (E.g. Test) to connect to and click **Connect**.
   If there is a configured network key for the AP to connect to, the Enter Network Key window appears.
   Enter the **Network Key** in the window and then click the **Connect** button.

**Note**

When a network key is not defined for a selected AP, click on Link to display the warning message box. Then click Connect again in the box.

Now when Connected in AP is displayed, and you can access the network.

**Note** **Checking the connection status.**
Move the mouse pointer over the **Wireless Network Connection** ( ) icon on the taskbar, and the connection status is displayed.

# Connecting to computer-to-computer networks
## (peer-to-peer or ad hoc)

In computer-to-computer wireless networks, you can wirelessly connect 2 or more computers that have wireless LAN modules.

Using this method, a computer that is not connected to the Internet can share the Internet by accessing another computer connected to the Internet. (Refer to “Sharing an Internet connection through a wireless network” (See P. 4-8. 'To share an Internet Connection')

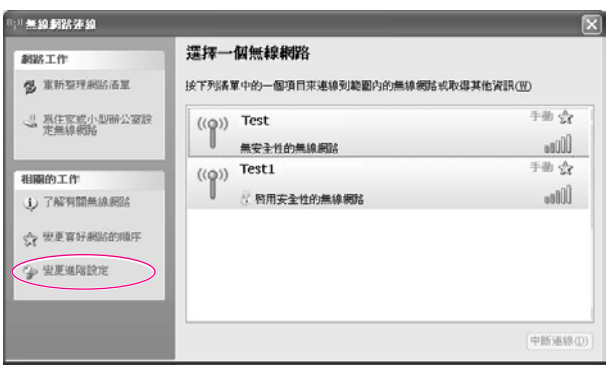
You can connect by completing the following steps:

- ▶ Step 1. Set up a computer-to-computer network on a computer.
- ▶ Step 2. Connect to the configured computer from other computers.

## ■ Step 1. Setting up a computer-to-computer network

1. Right-click on the **Wireless Network Connection** ( ) icon on the taskbar, and select **View Available Wireless Networks**.

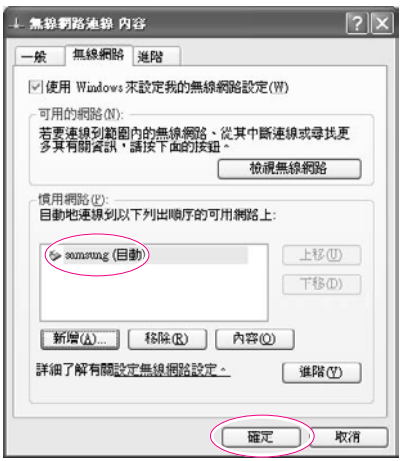
2. Click **Change the order of Preferred Networks.**



3. On the Wireless Networks tab, click **Advanced**.
4. Clear '**Automatically connect to non-default network**' check box, if it is selected.
   Select '**Computer-to-computer (ad hoc) networks only**', and click **Close**.
5. In the Wireless Networks tab, click **Add**.
6. Enter the network name (e.g. samsung), and unselect '**The key is provided for me automatically**'. Enter the encryption key in the Network key field, and click **OK**.

**Note** To prevent a network connection from an unauthorized user, it would be better to configure a network key (encryption key). A network key consists of 5 or 13 alphanumeric characters (e.g. magic), or of 10 or 26 hexadecimal numbers (a hexadecimal number is represented by numbers '0' to '9' or letters 'a' to 'f').

7. Check that the configured network name (e.g. samsung) is in the 'Preferred networks item', and click **OK**.

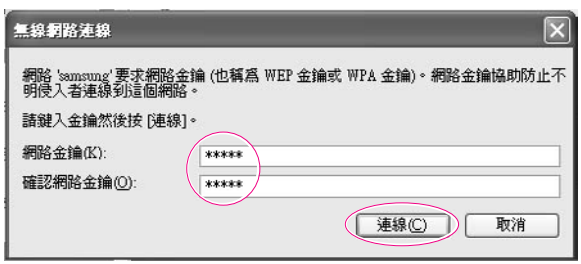



Now your wireless network setup has been completed.

## ■ Step 2. Connecting to the configured computer

1. Right-click on the **Wireless Network Connection** ( ) icon on the taskbar, and select **View Available Wireless Networks**.
2. Select the wireless network name (e.g. samsung) specified in “Connecting to computer-to-computer networks (peer-to-peer or ad hoc)”, and click **Connect**.

3. Enter a cryptographic key in the network key box and click Connect.

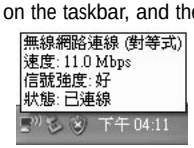



**Note** If the network key is not configured in “Connecting to computer-to-computer networks (peer-to-peer or ad hoc)” on P. 4-13, just click **Connect**, without any keystrokes.

When connected to the wireless network, the system displays **Connected** in the selected network of the Network Connection window.

**Note** **Checking the connection status.**

Move the mouse pointer over the **Wireless Network Connection** ( ) icon on the taskbar, and the connection status is displayed.



# Wireless Network Setup Using the Wireless LAN Setup Program.

You can use a wireless LAN by using a wireless LAN configuration program (PROSet) provided separately.

To use wireless network connection, complete the following procedures.

▶ Step1. Install the wireless LAN configuration program (PROSet).

▶ Step2. Configure wireless network settings through the wireless LAN configuration program.

## ■ Step 1. Installing the wireless LAN configuration program (PROSet)

You can install the wireless LAN client administrator program following the instruction displayed automatically when you insert the system software CD. Insert the system software CD into the CD-ROM drive, and install the wireless LAN configuration program.

## ■ Step 2. Using the wireless LAN configuration program (PROSet)

Double-click the **wireless LAN program** ( ) icon on the taskbar.
(Or, click **Start > All Programs > Intel PROSet Wireless > Intel PROSet Wireless**.)

**Note** In some languages, some buttons on the window may not be displayed. If this is the case, resize the window to use the program.

Configure wireless network settings in PROSet following the procedures below.

- **To connect to an Access Point**

  To connect to an access point or existing computer-to-computer (Ad Hoc) network, refer to the following procedures. (To create a new computer-to-computer network, refer to the following **To create computer-to-computer (Ad Hoc) network** section.)

1. In Available Networks, click on **Refresh**.
2. Select the name of desired access point or computer-to-computer network to connect from the searched available networks list, and click **Configure**.

**Note**

If your desired network does not appear, click **Refresh**.

An access point is represented by the ( ) icon, and a computer-to-computer network is represented by the ( ) icon. An ( ) icon is displayed in front of an access point or a computer-to-computer network with configured security settings.

3. Enter **Profile Name** and click **Next**.
4. In the Search Security Settings window, the wireless network security search message will appear. Click **Next.**
5. Enter the **network authentication, data encryption (WEP), encryption level, key index**, and **wireless security password** configured for the target access point or computer-to-computer network in the Security Settings window, and click Next.

**Note**

The network authentication, data encryption (WEP), key index, and password of a access point are configured in the access point management program. For information on the security information, check the security settings of the access point or ask your wireless network administrator.

To connect to an existing computer-to-computer (Ad Hoc) network, enter the password configured when creating the computer-to-computer network for the first time. You do not need to enter network authentication or key index.

**Security Settings**

- **Network authentication** : The network authentication option includes Open System and Shared Key. When you select Open System, no authentication is applied (however, encryption is supported). When you select Shared Key, a WEP key is used for authentication. The default setting is Open System
- **Data encryption (WEP)** : The IEEE 802.11 WEP (Wired Equivalent Privacy) standard defines two levels of encryption, a 64-bit key (this is sometimes represented by 40bits) and a 128-bit key.
- **Key index** : Select the current encryption key index used by the access point out of 1 to 4.
- **To use encryption key** : Click **Use pass phrase** to activate, and enter 5 (for 64-bit) or 13 (for 128-bit) alphanumeric characters (represented by 0-9, a-z, or A-Z).

6. The Done window appears, click **OK**.

When a wireless connection to an access point is established, connection icon ( ) appears in front of the name of connected profile.

- **To create a computer-to-computer (Ad Hoc) network**

  To create a new computer-to-computer (Ad Hoc) network or to connect to a hidden access point (Stealth/Closed Mode), refer to the following procedures.

**Note** A hidden access point is an access point that exists, but is configured not to be detected by the scan operation to prevent access attempts from unauthorized users.

1. In Profiles, click on **Add**.
2. Enter **Profile Name** and **Network name (SSID)**, select **Operating Mode**, then click **Next**.

**Note**

**What is a network name (SSID)?**
Network name (SSID) is a name that a wireless adapter uses for identifying connection. Enter the name of computer-to-computer network to create (e.g., samsung) or the name of access point to connect. The network name identifies cases. (capital and lowercase) For the name of access point, check the settings of the access point, or ask your wireless network administrator.

**Operating Mode:**

**Network (Infrastructure) - Connect to an Access Point :** Select to connect to an access point.

**Device to device (Ad hoc) - Connect directly to other computers :** Select to create a computer-to-computer (Ad Hoc) network.

3. Configure password setting to be used for computer-to-computer network connection in the Security Settings window.
   To connect to an access point, enter the **network authentication, data encryption (WEP), encryption level, key index**, and **wireless security password** configured in the access point.

**Note** It is recommended to configure data encryption for security purposes when creating a computer-to-computer network connection profile. For more information on security settings refer to the security settings in Connecting to AP or Help.

When you are creating a computer-to-computer network connection profile, the network authentication setting is disabled.

4. When a profile creation is completed, the new created profile appears in the profiles list. Select corresponding profile, and click Connect to connect to the created profile.

   When a wireless connection to the created profile is established, the connection icon ( ) appears in front of the name of the connected profile.

# Using Network Services

While the computer is connected to the network, you can use network services to share files, folders, and printers.

**Note** Network services are provided for the computers that are connected to the network through wired or wireless network connections. (See Pages 4-4, 4-11, **Configuring Network Environment Settings**)

## Sharing files or folders

This section describes how to share files and folders between computers connected to the network.

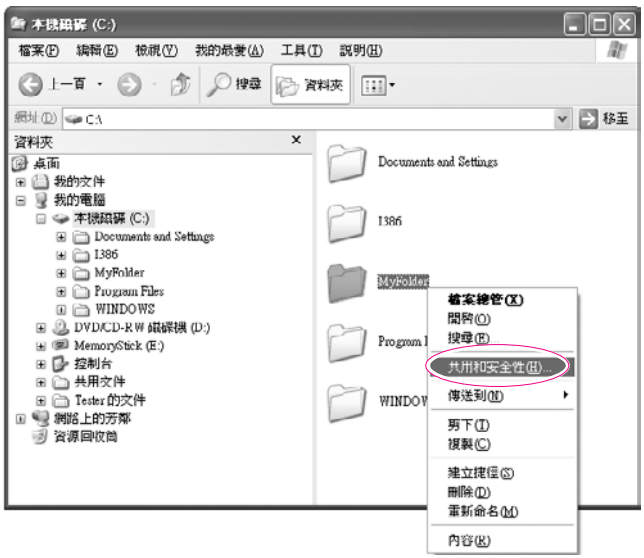
To share files, complete the following procedures:

- ▶ Step 1. Configuring the sharing of files and folders on a computer.
- ▶ Step 2. Accessing shared files and folders from another computer.

**Caution** When a file or folder is shared, anyone connected to the network can open and delete the shared file or folder.
Configure a file sharing network only when the network is secure, and do not share important data.

## Step 1. Configuring Sharing

1. Right-click the target file or folder to share in **My Computer**, and select **Sharing and Security**.




2. Click '**IF you understand the security risks but want to share files without running the wizard, click here**'.

**Note**

It has the same security effect as that of the '**Network Setup Wizard**'.

This screen does not appear if Internet Sharing Network Wizard has been installed in the computer-to-computer wireless network environment.

3. Select '**Just enable file sharing**', and click **OK**.
4. In the 'Network sharing and security' field, select '**Share this folder on the network**', enter the share name, and click **OK**.

**Caution**

Be cautious when selecting 'Allow network users to change my files' since other network users can change the files in the shared folder.

The file and folder sharing configuration has been completed.

## Step 2. Using Shared Files or Folders

This section describes how to access shared files or folders if your computer is a member of the same workgroup.

1. Click **Start > My Computer**. Under **Other Places**, click **My Network Places** in your computer.
2. Click '**View workgroup computers**', and click the desired computer to access the shared file.

**Note**

**If your computer is a member of another workgroup:**

1. Click **Other Places > Microsoft Windows Network**.
2. Click the desired workgroup.
3. Click the desired computer to display the shared files or folders.

# Sharing Printers

This section describes how to share a printer between computers connected to a network.

To share a printer, complete the following procedures:

- ▶ Step 1. Configure printer sharing in the computer connected to the printer.
- ▶ Step 2. Add and use the shared printer in other computers on the network.

## ■ Step 1. Configuring Printer Sharing

1. From the computer connected to the printer, click **Start > Printers and Faxes**.
2. Right-click the printer you want to share, and click **Sharing**.

3. Select '**Share this printer**', enter a share name for the shared printer, and click **OK**.

4. In the Printers and Faxes window, you will find the printer icon has been changed to another icon on a hand.

## Step 2. Adding and Using a Shared Printer

1. From a different computer that wants to use the shared printer, click **Start > Printers and Faxes**.
2. Click **Add a printer**.
3. In the **Add Printer Wizard**, click **Next**.
4. Select '**A network printer, or a printer attached to another computer**', and click **Next**.
5. Select '**Browse for a printer**', and click **Next**.
6. Select the workgroup or computer, select the desired printer, and click **Next**.

If you cannot find the desired printer, try again after a while.

7. Read the warning about a shared printer, and click **Yes** to install the shared printer.
8. Select **Yes** for 'Do you want to use this printer as a default printer?', and click **Next**.
9. Click **Finish**.
10. When the printer sharing configuration has been completed, the shared printer appears in the Printers and Faxes window.

Now you can print using the shared printer even if your computer is not directly connected to a printer.

# Using Bluetooth Devices (Optional)

You can transfer files between Bluetooth devices, use the Internet, and construct a Personal Area Network. In addition, you can use a wireless keyboard, wireless mouse, and a wireless printer that have the Bluetooth function.

**Note**

You can only use the Bluetooth communication function between devices (computers, mobile phones, PDAs, printers, etc.) which support Bluetooth.
The Bluetooth function is provided through the Bluetooth software included in Microsoft Windows XP SP2.

**Bluetooth Device On-line Help**

For more detailed procedures on using the Bluetooth function, click **Start > Help and Support > Network and the Web > Networking > Wireless networking > Bluetooth devices,** and view the descriptions.

## The following functions are provided by the Bluetooth software.

### ▶ Transferring files

You can transfer files between Bluetooth devices such as computers, mobile phones, PDAs (Personal Digital Assistant), etc.
For more detailed procedures on transferring files, refer to "**Send and Receive files to/from a Bluetooth device**" of the Bluetooth On-line help.

### ▶ Using the Internet via a mobile phone

You can connect to the Internet through your mobile phone after connecting it to a computer which is connected to the Internet.
For more detailed procedures on using the Internet, refer to "**Install a Bluetooth mobile phone**" and "**Create a Bluetooth connection to the Internet using a Bluetooth mobile phone**" of the Bluetooth On-line help.

### ▶ Using a wireless keyboard and mouse

You can use a wireless keyboard and mouse which have the Bluetooth function.
For more detailed procedures on using a wireless keyboard and mouse, refer to "**Install a Bluetooth keyboard**" and "**Install a Bluetooth mouse**" of the Bluetooth On-line help.

### ▶ Using a wireless printer

You can use a wireless printer if the printer supports Bluetooth HCRP (Hardcopy Cable Replacement Profile).
For more detailed procedures on using a wireless printer, refer to "**Install a Bluetooth printer**" of the Bluetooth On-line help.

- **Using a Personal Area Network**
  You can exchange files between computers by connecting to the shared folder of another computer via a Personal Area Network.
  For more detailed procedures on using the Personal Area Network, refer to "**Join a personal area network**", "**Provide a name for your computer on a personal area network**" and "**Bluetooth personal area networking overview**" of the Bluetooth On-line help.

- **Sharing data with a Palm Hand-held PC or a Pocket PC**
  You can transfer data to and from a Palm Hand-held PC or Pocket PC.
  For more detailed procedures on sharing data, refer to "**Installing a Palm handheld computer using Bluetooth technology**" and "**Installing a Pocket PC using Bluetooth technology**" of the Bluetooth On-line help.

## Precautions

- Please do not send files larger than 60MB when transferring files through a File Transfer Function or Personal Area Network. Sending a file larger than 60MB may fail due to an unstable Bluetooth connection.

- When using the Personal Area Network function, other computers may not appear in My Network Places. If you cannot see other computers after 5 minutes, click "**Start > Search > Computers or people**" and enter the name of a computer and search for it.
  For procedures to view the name of your computer, refer to "**Provide a name for your computer on a personal area network**" of the Bluetooth On-line help.

# Infrared Communication

Your computer may have infrared port. Using the infrared port, you can transfer data to computer, printer, camera and other devices through infrared communication.

**Note**

**Restrictions in Use**
For infrared communication, the devices should have infrared communication capability, and should be located within 1 m of each other. In addition, there should be no obstacle between the infrared ports of the target devices.

## ■ To establish infrared connection

The procedures to communicate with another computer through infrared port are described below.

1. Locate the target computers so that the infrared ports face each other.
2. When infrared communication is available, a beep sounds and Send files to another computer icon ( ) appears on the desktop.
   You can now transfer data through infrared communication.

## ■ To transmit data through infrared communication

The procedures to transmit files to another computer are described below.

1. Connect the target computers through infrared communication.
2. Drag a file over the Send files to another computer icon in one of the computer.
3. [Wireless Link] dialog appears on the other computer screen. Click Yes.
4. When the file transmission is completed, click Close to close the [Receiving Files] dialog.

**Note**

**To change infrared communication configuration**
To change the folder to save the received files, or to receive images from a digital camera, click **Start > Control Panel > Printers and Other Hardware > Wireless Link** and change the configuration.

**Note**

**If you cannot use infrared communication**

1. Check BIOS setup.

   a. Start the computer, and press **<F2>** to enter System Setup.
   b. Select **I/O Device Configuration** in the **Advanced** menu, and press **<Enter>**.
   c. Select **Infrared Port**, and set the item to **Enabled** by pressing **<F5>** or **<F6>**.
   d. Save the configuration, and exit the Setup.

2. Check Windows configuration.

   a.Click **Start > Control Panel > Performance and Management > System > Hardware tab > Device Manager.**
   b. Double-click the “Infrared device”, and then double-click “IrDA Fast Infrared Port” item.
   c. On the **Advanced** tab, select “Infrared Transceiver A” in the Properties field, then select “HP HSDL-2300/3600” in the Value field.
   d. Click **OK**.

# Chapter 5

## System Management

This chapter provides information on efficient computer management.

# Managing Power

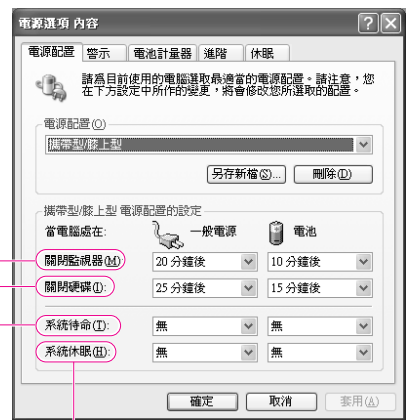
Use Power Options to save power consumption. You can switch Standby Mode while you are not using your computer or configure the system components to shut it down on a specified time.

## Specifying Power Save Time

You can specify Turn Off Monitor, Turn Off Hard Disk, System Standby Mode, and Maximum Power Save Mode.
Select **Start** > **Control Panel** > **Performance and Maintenance** > **Power Options** > **Power** Schemes tab. Then specify time in each item and click OK.

**Note**

- By default, the power scheme is configured to SAMSUNG mode. SAMSUNG mode extends the battery life and optimizes the Intel Speedstep function. Since the CPU power consumption is automatically optimized to conserve power when the computer is operating on battery power, an application may be executed slower than when it is operating on AC power.
- To use the SAMSUNG mode after reinstalling Windows, install the PowerCFG program using the system software CD.




**Monitor Off**
The LCD display goes into Power-Saving mode after the specified period of time.

**Hard Disk Off**
The Hard Disk goes into Power-Saving mode after the specified period of time.

**Standby Mode**
If the computer is not used for the specified period of time, the monitor and hard disk drives are turned off to reduce power consumption.

**Hibernation Mode**
Saves the current working status onto the hard disk and turns the computer off. Pressing the Power button restores the computer to the previous working status.

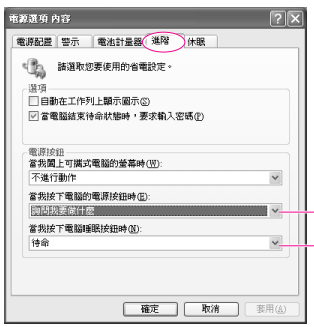
**Note**

- Press Power button to use computer again in Standby Mode or Hibernation Mode.
- You can schedule your system for shutdown, hibernation or standby modes by clicking System > Computer Scheduling of the EasyBox program.(P. 3-11)

# Using the Power button

You can configure the function of the power button.

Click **Start** > **Control Panel** > **Performance and Maintenance** > **Power Options** and select the Advanced tab.




Configure the Power button function.

Configuring the function of the <fn>+< Esc > key combination.

**Caution** When the Power button is configured to put the system into Power-Saving Mode, manually shutting down the computer requires the Power button to be pressed and held for more than 4 seconds.

# Using the Battery

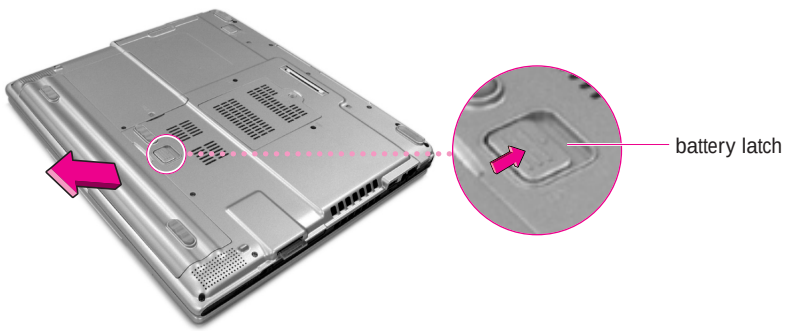
Please refer to the following instructions when running the computer on battery power without connecting the AC power.
This computer uses smart rechargeable Lithium-Ion (Li-Ion) battery.

**Caution**

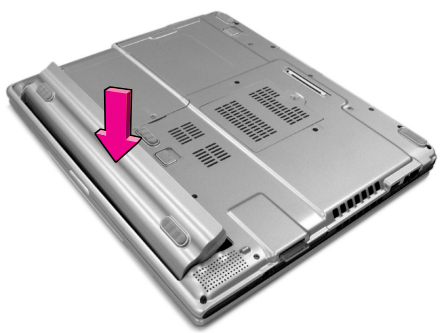
- Please read the instructions on the battery before use.
- Please refer to the system operation environment (Page A-2) of this manual and operate and store the battery at room temperature.

## Ejecting and Attaching Battery

1. Shutdown system and close LCD.
2. Put the computer upside down.
3. While pushing the battery latch to the Unlock position ( ), remove the battery.




4. To attach the battery, place battery into the system. Check that the battery latch is in the Lock ( ) position.



# Monitoring the Battery Charge

You can view the battery charge status by completing the following procedures.

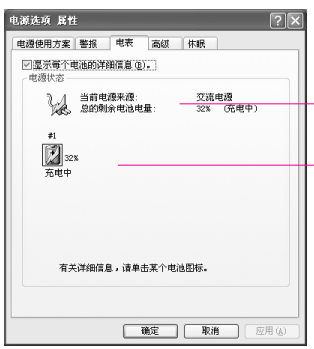
## ■ Using the shortcut key to view

Press the <fn> + < F2 > key combination on the keyboard and then the current power source and the current remaining battery charge are displayed at the top left of the screen.

## ■ To view through the Control Panel

Select Start > Control Panel > Performance and Maintenance > Power Option > Power Measure tab.

Then you can view the current power source and the current remaining battery charge.




Power supply status

Remaining Battery Charge

**Caution** **Using the battery**

Battery is an expendable supply, so when you use it for a long time, the capacity/battery life is shortened. If the battery life time is reduced to under half of the initial time, we recommend that you purchase a new battery to use.

**Note** **Battery Warning**

You will hear an alarm when the remaining battery charge is under 10%. Connect the power cable or turn off the computer and install a fully charged battery. When the remaining battery charge is under 3%, the computer automatically saves current work and turns off. This may be different according to the settings in Control Panel > Performance and Maintenance > Power Options > Alarms tab.

**When turning on the system when the remaining battery level is below 5%**

the system will not be started properly so as to prevent any loss of data. Connect the AC adapter, and then turn the system on.

# Increasing Battery Life

## Adjust LCD Brightness

Press the <fn>+< > key combination on the keyboard to dim the LCD brightness. ((p. 1-13) For more information about how to adjust the screen brightness, refer to.)

## Using the Battery Manager

Using the Battery Manager program, you can change the configuration of the LCD brightness, the sleep timer and system devices, and can extend the battery usage time to maximum.

**Click on Start > All Programs > Samsung > Samsung Battery Manager > Samsung Battery Manager**

▶ **Maximum Battery Saving Mode :** This mode extends the battery usage time to maximum. This may degrade the performance of the system.

▶ **Normal Mode :** This mode extends the battery usage time to normal.

▶ **Maximum Performance Mode :** This mode provides maximum system performance at the cost of the battery. Therefore, the battery usage time may be reduced in this mode.

▶ **Custom Mode :** In this mode, a user can configure a detailed configuration to save the battery usage time. A user can adjust the LCD brightness, select the time before the system sleeps, select the screen color quality and select the graphics mode. A user can also turn the wireless LAN function on and off.

참고 The Screen Color Quality, Graphics Mode and Wireless LAN in the Detailed Configuration represent the current configuration. Selecting the Set button applies the configuration even without pressing the 'OK' or 'Apply' button.

**Note**

**Controlling the LCD Brightness**

If you restart the system after changing the LCD Brightness in Custom Mode, the LCD brightness is changed to its default value. To keep the brightness value configured in Custom Mode, configure the [Brightness Control Mode] item to 'User Control' in the [Boot] menu of the System Setup. (See P. 6-2.)

If it is configured to [Auto], the LCD brightness is changed to level 8 when the power is supplied by the AC adapter, or to level 1 when the power is supplied by the battery according to the default brightness values.

**Power Saving Effect**

This shows the battery usage time after changing the system configuration in 10 levels for Maximum Battery Saving Mode and in 5 levels for Maximum Performance Mode.

**When Running a Game or Multimedia Application**

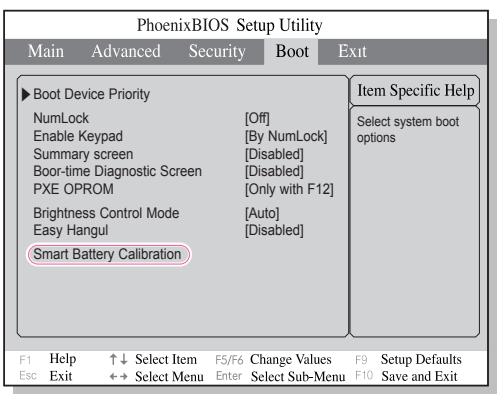
A game or multimedia application may not work smoothly in Maximum Battery Saving Mode. It is recommended selecting at least Normal Mode in this case.

## Use Battery Calibration

When the battery is in continuous use without being completely charged or discharged, there may be a difference between the displayed battery charge and the actual battery charge, owing to the inherent characteristics of the battery.

Completely discharging the battery and fully charging it can correct this problem. Completely discharging the battery for this reason is called battery calibration. The procedure to calibrate the battery is described below.

1. Turn off the computer and disconnect the AC power.
2. Turn on the computer and press <F2> to enter into System Setup.
3. Select **Smart Battery Calibration** in the **Boot** Menu, and press <Enter> to start. The calibration process usually takes 3 to 5 hours depending on the remaining battery charge.



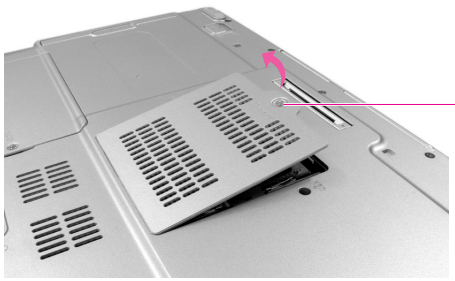

4. When the calibration process is complete and the battery is completely discharged, connect the AC power adaptor to fully recharge the battery.

# Upgrading Memory

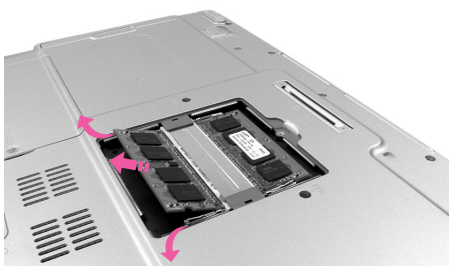
This computer has one or more 128 MB or 256 MB memory module(s). Two memory module sockets are provided so that you can replace memory or install an additional memory module.

**Note** Before replacing the memory module, turn the system off completely. Do not replace the memory module when the system is in Rest Mode.

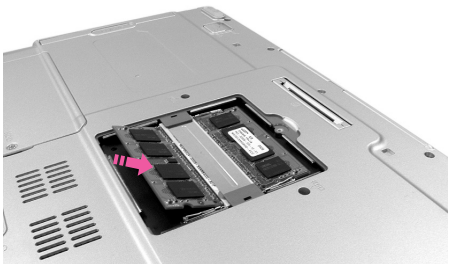
1. Using a screwdriver, open the memory-module compartment cover on the bottom of the system.



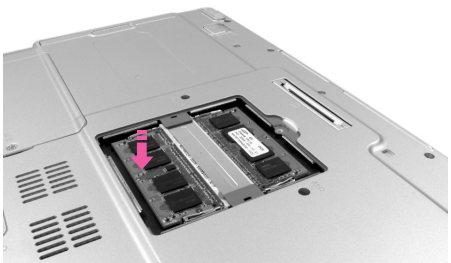

2. Push the memory module tabs outward to pop the memory module outward. Pull the module out at an angle of about 30°.



3. Align the new memory module connectors accordingly and slide it into the slot at a 30˚ angle.



4. Push the memory module in until the module clicks into place. If the memory module is not fixed completely, push the module while pressing the memory module tabs outward.

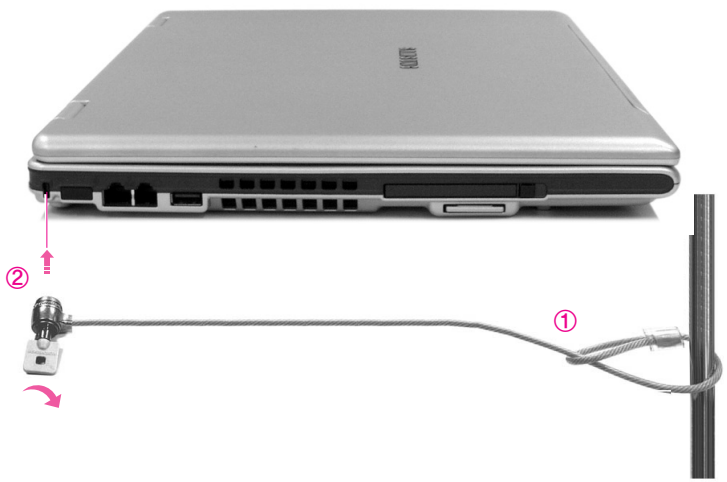


5. Close and fix the memory-module compartment cover using a screwdriver.

# Using the Security Lock

The security lock is a device used to physically 'fix' the system when using it in a public place. The locking device needs to be purchased separately. The shape and methods of use may differ depending on the manufacturer. Please refer to the manual provided with the security lock for proper use.

Fix the Kensington lock cable to a fixed object (①) and connect the cable to the Anti-theft port at the rear of the system (②).



# Traveling with the Computer

- When traveling, keep the system and the AC adapter disconnected. Otherwise, it may affect the functions of the system.

- Make sure that the system is not pressed by a book or heavy objects. The LCD may get damaged.

- When traveling by plane, use a bag designed for notebook PCs and hand-carry the computer.

- Allow the computer and disks to pass through security X-rays but do not pass the computer and disks through metal detectors.

- Do not use the computer during take off and landing.

- Make sure the eject button of PCMCIA card slot is locked.

- To reduce the risk of ignition cause by small metallic object, such as paper clip or staples, moving around opening above keyboard, please lock the panel side with main enclosure during transportation.

- The Docking Station Device is not transportable device.

# Chapter 6

## Customizing your computer

This chapter provides information how to use the system setup, customizinig screen settings.

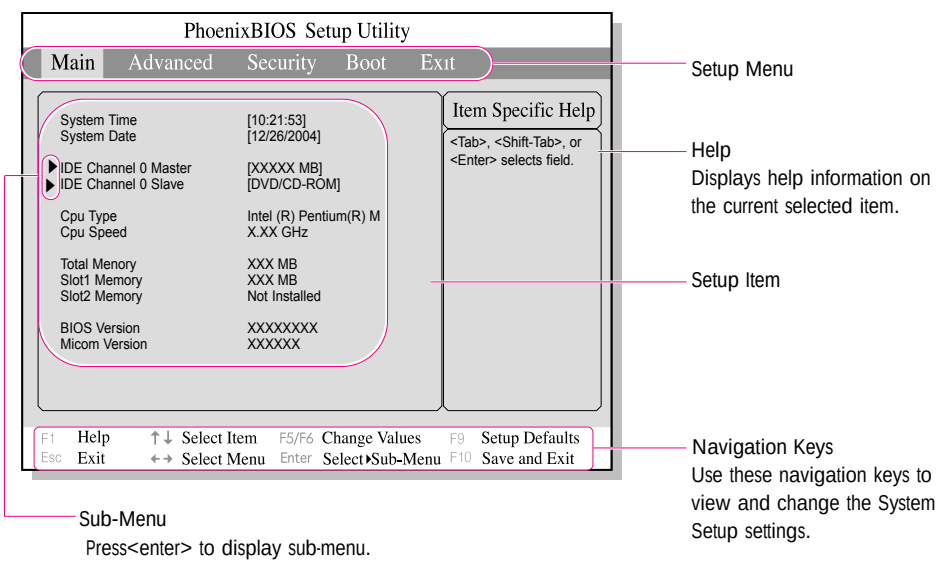
# Using System Setup

System Setup is a utility that enables the computer environment to be changed to suit the user. System Setup is used when changing the system password, booting priority, or when adding new devices.
Please use extra care when configuring System Setup, as it may cause serious system error.

## To enter System Setup

1. Turn on the computer.
2. When the booting screen appears, press <F2>.

3. The initial System Setup screen will appear in a moment.

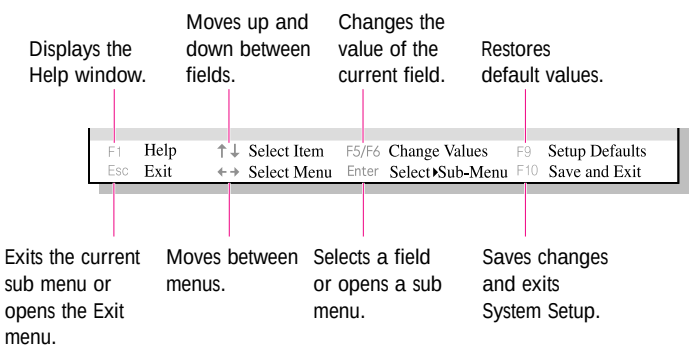


# System Setup Menus

| Menu Items | Description |
|---|---|
| Main | Configures the basic system environment |
| Advanced | Configures OS and major chipset options of the system |
| Security | Configures system security options |
| Boot | Configures booting options |
| Exit | Exits System Setup |

**Note** For more information on System Setup menus or options, please refer to Help on the right side of the screen.

# System Setup Navigation Keys


Displays the Help window.
Moves up and down between fields.
Changes the value of the current field.
Restores default values.
F1 Help
Esc Exit
↑↓ Select Item
↔ Select Menu
F5/F6 Change Values
Enter Select▸Sub-Menu
F9 Setup Defaults
F10 Save and Exit
Exits the current sub menu or opens the Exit menu.
Moves between menus.
Selects a field or opens a sub menu.
Saves changes and exits System Setup.

**Note** Contents of System Setup may be changed due to functional improvement or other reasons.

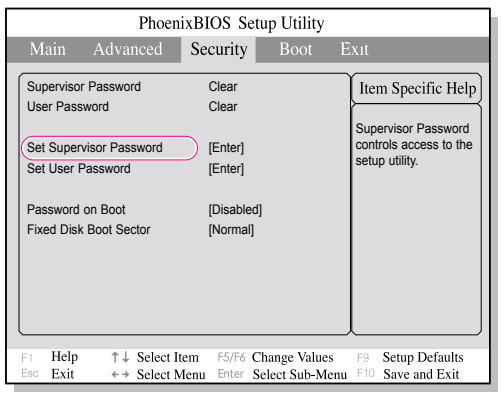
# Configuring the Password

## Setting the Supervisor Password

By configuring a supervisor password, you can restrict system access to authorized users only.

**Note** : Do not lose or forget your password. If you have forgotten your password, contact the Samsung service center.

1. Select the **Security** menu in the System Setup. (To enter into System Setup, see Page 6-2.)
2. On the '**Set Supervisor Password**' item, press <Enter>.




3. Enter a password, press <Enter>, re-enter the password for confirmation, and press <Enter> again.

4. When a message confirming the password configuration appears in the [Setup Notice] window, press <Enter>.

## Setting the User Password

You can configure user passwords so that other users can use the system.

**Note**

- Before configuring a user password, a supervisor password must have been configured.
- Users can start the system with their user password, but cannot enter into the System Setup.
- Deactivating the supervisor password also deactivates the user password.

On the 'Set User Password' item, press <Enter>, and complete step 3-4 of Configuring the Supervisor Password.

## Activating the Booting Password

**Note**

- Before activating the booting password, the supervisor password must have been configured.

Set the 'Password on boot' option to [Enabled].
From now on, you must enter the password to boot the system.

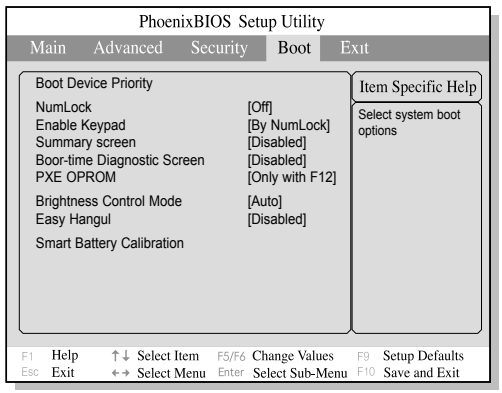
## Deactivating the Password

1. On the password to delete, press <Enter>. (e.g. supervisor password)
2. Enter the current configured password, and press <Enter>.
3. Leave the 'New Password' and 'Confirm New Password' field empty, and press <Enter> to deactivate the password.

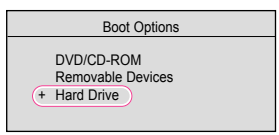
# Changing Booting Priority

You can select the booting priority among the devices such as the hard drive, CD-ROM drive, etc. The following example describes how to configure the hard drive as the first booting device when the CD-ROM drive is configured as the first booting device by default.

1. Select the Boot Menu in System Setup.
2. Press <Enter> on **Boot Device Priority** item.




3. Use the < ↓ > key to move to the **Hard Drive** item, and press <F6> key until it is at the very top.




4. Press <F10> to save the changed configuration, and exit System Setup.
   Now you can boot the system with the hard disk drive as the first booting device.

# Configuring Resolution and Color Depth

Screen resolution is the number of pixels displayed on the screen. High resolution makes the overall screen area large, although individual items appear small. Color quality is determined by the number of bits used to represent a pixel on the screen. High color quality displays more number of colors on your screen.

1. Select **Start > Control Panel > Appearance and Themes > Change the screen resolution**.
2. Make changes on the **Settings** tab of the [Display Properties] dialog.

You can view the graphics chipset.
To change the number of colors displayed on a monitor, select an appropriate color quality.
To change your screen resolution, move the slider to select an appropriate resolution.

**Note**

The Graphics Chipset

– For the P40 model, either an ATI or Intel Graphics Chipset is installed. You can view the installed graphics chipset in the Display Properties window.

- ATI Graphics Chipset: ATI MOBILITY RADEON X300/X600 Chipsetor ATI MOBILITY RADEON Graphic Chipset
- Intel Graphics Chipset: Mobile Intel(R) 915GM Express Chipset

3. When you have completed configuration, click **Apply**.

**Note**

XGA : models, configuring the Screen resolution to 1024x768, and the Color quality to Highest (32 bit) is recommended.

SXGA+ : models, configuring the Screen resolution to 1400x1050, and the Color quality to Highest (32 bit) is recommended.

# Using External Display Devices

**(ATI Chipset model, refer to P.6-7)**

Using external display devices such as a monitor, projector, TV, etc allows you to view screen images alternatively or simultaneously on each device. Additionally, you can extend the screen onto two display devices to use a larger workspace.Using external display devices is especially useful when you are giving a presentation or watching a movie through your TV.

## ■ Switching Display Devices Using the Shortcut Key

You can watch the screen through either the LCD or an external display device, or you can even watch the screen through both the LCD and an external display device simultaneously.

1. Connect the external display device (e.g. a monitor or a projector) to the corresponding port of the system.
   To connect a TV, connect the TV to the TV output port of the system.

**Note**

**Connecting to a TV**

To connect to a TV, connect the TV-Out port of the system and the S-Video port of the TV with the S-Video cable. (The cable is not included and needs to be purchased additionally.)

**Connect to a DTV**

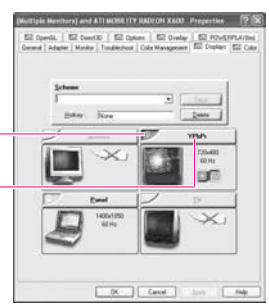
To connect to a DTV, connect the TV-Out port of the system and the Component port of the TV output using the Dongle cable and the Component cable (the Dongle cable is not included and needs to be purchased additionally).

Connect the Dongle cable to the TV-Out port of the system and the Component cable.

(The Dongle cable is not included and needs to be purchased additionally.)

For ATI chipset models, you have to change the configuration as follows after connecting the cable.

1. Click Start > Control Panel > Appearance and Themes > Display
2. Click the Settings tab > Advanced
3. Click the Display tab.
4. Select YPbPr On/Off.
5. Click Apply.
6. Click YPbPr.
7. Select the appropriate TV type in the YPbPr Properties window and Click Apply.



2. Press the <**Fn**> + < > key. Provided that an external display device is connected, the display option changes in LCD > CRT > LCD+CRT order whenever the key is pressed.

**Note**

- Provided that multiple external display devices are connected, the display order is LCD>CRT>TV>LCD+CRT>LCD+TV>LCD whenever the <Fn>+< > keys are pressed. In the DOS environment, the screen is output to LCD and CRT in this sequence.
- The TV function is not supported. In full screen DOS mode of Windows, you cannot use the hot keys.

## ■ Using Dual View to View an Extended Screen

You can expand the screen into two display devices and work conveniently in separate workspaces.
In Dual View mode, you can select the screen resolution and color quality for each display device, as if there were two separate graphics cards.

1. Connect the external display device (e.g. a monitor or a projector) to the corresponding port of the system.
   To connect a TV, connect the TV to the TV output port of the system.
   ('See P. 6-8 Connecting to a TV')
2. Press touchpad right button on the desktop, click **Properties**, and then click the **Settings** tab.
3. Click the **monitor** '**2**' icon, select the '**Extend my Windows desktop onto this monitor**' check box, and then click **Apply**.

4. When you have completed this, click **OK** on the left of the Troubleshoot button. The primary display device (the LCD) is indicated as '1', and the secondary display device is indicated as '2'. Now you can use each of the two display devices as independent display devices.<Enter> to deactivate the password.

1: Primary

2: Secondary

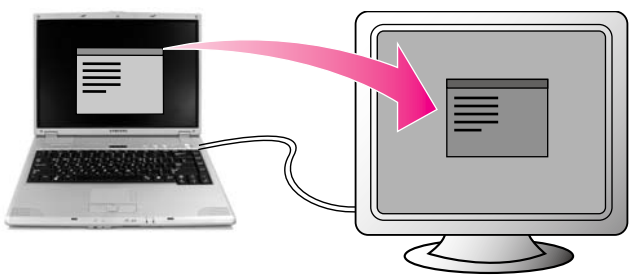
**Note** When you use Dual View, configuring the LCD as the '**Primary**' monitor is recommended.

**Caution** If the screen of the secondary display device is displayed at 640x480 pixels, with 256 colors, change the settings to the desired screen resolution and color quality in the [**Display Properties**] window.

## ■ Deactivating Dual View Mode

Click the **monitor** '**2**' icon, clear the '**Extend my Windows desktop onto this monitor**' check box, and then click **Apply**.

**Note** **To move a window between display devices in Dual View mode**
Click the title bar of the window in the primary display device (1, the LCD), and drag it to the secondary display device (2). The window moves to the secondary display device.



# Using External Display Devices

**(Intel Chipset model, refer to P.6-7)**

Using external display devices such as monitor or projector, you can view the screen images alternatively or simultaneously. You can extend the screen into two display devices to use larger workspace.

Using external display devices would be especially useful when you are giving presentations or watching a video file.

1. Connect the external display device (e.g. a monitor or a projector) to the corresponding port of the system.
   To connect a TV, connect the TV to the TV output port of the system.
   ('See P. 6-8 Connecting to a TV')

2. Right-click on the desktop, and select **Graphics Options > Graphics Properties**.

3. On the **Devices** tab, select your desired display device, and click **OK**. (The displayed device list is determined by the currently connected devices.

| | |
|---|---|
| **Monitor** | Displays on an external device such as monitor or a projector. |
| **TV** | You can only view the screen on the TV. |
| **Notebook** | Displays on the notebook LCD only. |
| **Intel(R) Dual Display Clone** | Displays the same screen on the notebook LCD, and an external device such as monitor or projector. |
| **Extended Desktop** | Extends the screen into the notebook LCD and an external device such as monitor or projector to use a 2 times larger workerspace. |

**Note**

**To switch display devices using shortcut key**

You can switch display devices easily by pressing <Fn>+< > shortcut key.

Provided that the CRT monitor is connected, the display order will be LCD > CRT > LCD+CRT whenever the <Fn>+< > key is pressed.

Provided that multiple external display devices are connected, the display order is LCD>CRT>TV>LCD+CRT>LCD+TV>LCD whenever the <Fn>+< > keys are pressed.

You cannot use the <Fn>+< > shortcut key in the full screen mode DOS prompt.

**To change display devices easily**

Right-click on the desktop, and select **Graphics Options > Output To** to change the current display device easily.

**To change the screen resolution and color quality**

If the screen does not appear clearly, please try to change the screen resolution and color quality. In the figure of step 3, select a device, and configure the color, screen area, and refresh rate.

When using an LCD and a wide monitor, the LCD and monitor screen sizes may differ. To make them the same size, select 'Apply the same settings to the 2 monitors'.

# Checking for Viruses

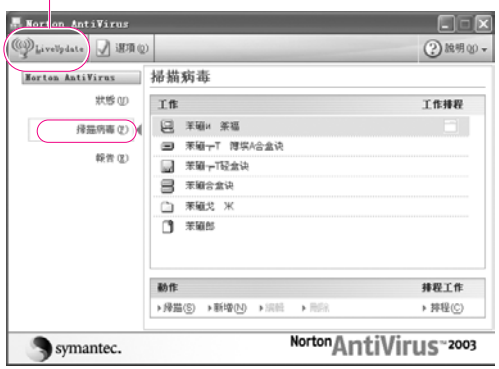
The Norton AntiVirus software is provided as the virus inspection program.

**Note**

When you first run Norton AntiVirus, the Norton AntiVirus Configuration window pops up. If you complete the configuration and your computer connect to network, you can download and install the latest updates via the network. When the live update is done, virus scanning starts automatically. To stop scanning, click on Stop.

If you didn't configure the Norton AntiVirus program, a security alert icon ( ) appears in the notification area on the right of the task bar. This indicates that the current security state of your computer is not secure. Configure the virus-scanning program to make the security alert icon disappear.

1. Select **Start** > **All Programs** > **Norton AntiVirus** > **Norton AntiVirus 2003**.
2. Click **Scan Virus**, select drive to inspect, and click **Scan**.




Vaccines for the latest viruses can be downloaded by connecting to Symantec's homepage.

3. If a virus is detected, select Automatic in Norton AntiVirus, and click **Next** to delete the virus.

# Chapter 7

# Recovering the Computer

This chapter provides recovery procedures using the System Recovery CD when the computer is not operating properly.

# Restoring the System

**Note** This description is only for models running Window XP.

The System Restore function allows you to restore your computer to an earlier copy (called restore point), and restores the settings if a problem occurs.

The System Restore function is provided by Windows XP to enable the resolution of various problems without reinstalling Windows XP completely.

You can use System Restore in the following cases.

- The system files are deleted or damaged by mistake.
- The system is unstable or a problem occurs in a device driver.
- A problem occurs after changing system files such as the registry.
- A problem occurs after installing a new program.

## Creating a Restore Point

Restore points are created at predetermined times and at times of significant system events such as when a program or a driver is installed. You can also decide when to create your own restore points.

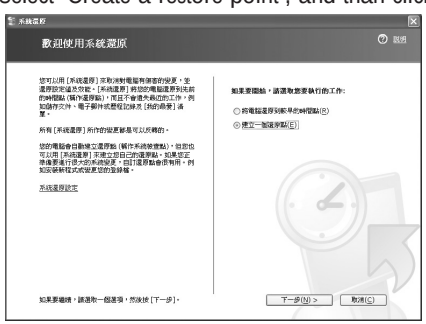
**Note**

There has to be more than 200MB of free space on the hard disk drive. If the disk space is insufficient, a saved restore point might be deleted.

You are recommended to create a restore point when you have purchased a new computer and before installing new programs or device drivers. Before creating a restore point, check that the computer is operating properly.

The procedures to create your own restore point are described below.

1. Click **Start > All Programs > Accessories > System Tools > System Restore.**
2. Select 'Create a restore point', and than click **Next**.

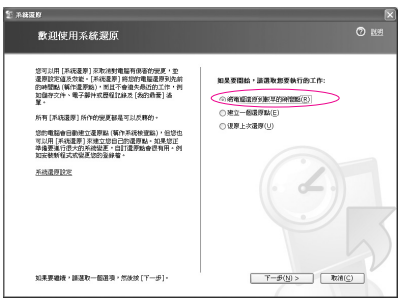



3. In the **Restore point description** box, type a name to identify the restore point, and than click **Create**. A restore point has been created.

## Returning your computer to an earlier restore point

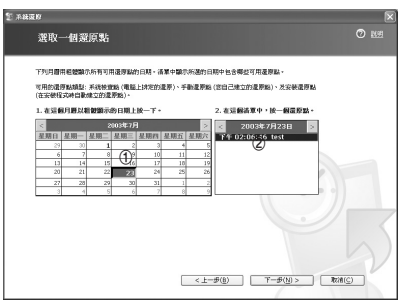
The procedures to return your computer to an earlier restore point when a problem has occurred are described below.

1. **Start > All Programs > Accessories > System Tools > System Restore**.
2. Select 'Restore my computer to an earlier time', and click **Next**.




**Caution** Since changes made after the Recovery Point may not be maintained, please back-up all necessary files to another location before performing system recovery.

3. Select the desired restore date (①) from the calendar restoration and select the desired restore point from the list (②), and then click **Next**.




**Note** The date of the restore point is displayed in bold font.

4. Confirm the selected restore point and click **Next**. System Restore shuts down Windows, and starts the restoration processes.
5. After the restoration is complete, Windows restarts. In the [System Restore completed] dialog box, click **OK**. Your computer has been restored to the selected restore point.

## Undoing the last restoration

The procedures to undo a restoration are described below.

1. Click **Start > All Programs > Accessories > System Tools > System Restore**.
2. Select 'Undo my last restoration', and click **Next**.
3. Confirm the restoration information to undo, and click **Next**. System Restore shuts down Windows and starts undoing the restoration.
4. After the undo restoration is complete, Windows restarts. On the [Undo the last restoration completed] dialog box, click **OK**. Your computer has been restored to the point prior to the last restoration.

# Reinstalling Software

If you have reinstalled the Windows operating system, or the system and program do not operate properly, you can re-install the driver and program using the system software CD.

**Note** This computer is optimized for Microsoft Windows XP. Therefore, Windows drivers other than the ones included in the System Software CD are not provided.

## Running the system software CD

Insert the system software CD into the CD-ROM drive. The initial screen appears automatically.

- **Standard Installation** : This displays a list of drivers or programs that are not currently installed on your computer from the system software CD provided.
  All necessary components are installed using the factory defaults.
- **Minimum Installation** : This displays the components (driver, Windows programs, etc) that, if not installed, may cause problems with the system performance. You can install only required components.
- **Custom Installation** : You can customize the installation of drivers and programs.

## Installing drivers and programs

1. Click **Standard Installation** in the main window of the System Software CD. (Standard Installation is recommended)
2. The system is scanned to display the drivers and programs that need to be installed.
3. Click **OK**. The drivers and programs are automatically installed as factory defaults.

4. When done, restart the system.

# Reinstalling Windows XP

If the Windows XP does not operate properly due to an error in the system, or if you have replaced the hard disk drive, you can reinstall Windows XP using the system recovery CD.

**Caution**

With the system recovery CD, you can reinstall Windows XP only. To return the system to the state of shipment, reinstall the device drivers and programs with the system software CD after reinstalling Windows XP with the system recovery CD.

Reinstalling Window may delete the data on the hard disk drive such as files, programs, etc. In order to minimize damage from data loss, please remember to always back up data. Samsung Electronics is not liable in the case of data loss, please consult your warranty statement for clarification.

**Note**

**When you have set a booting password**

You are asked to enter your booting password after restarting the system during the Windows installation. Enter the password to continue to the next steps.

## Reinstalling Windows

Explain Standard installation option as a standard.

1. Insert the system recovery CD into the CD-ROM drive.
2. In the initial screen, click **Standard installation**.

**Standard installation** : You can change the settings for partitioning, the installation folder, etc. during the Windows installation. However, reinstalling Windows may delete the data on the hard disk drive such as files, programs, etc. In order to minimize damage from data loss, please remember to always back up data.

**Quick Installation** : This re-installs Windows with the user data and the system configuration intact. The user data in the already existing Windows folders may be preserved as the existing Windows folders are overwritten.

3. The description for the standard installation appears. Click **Yes**.
   The installation starts, and the system will be restarted after a while.

**Note** **When Quick Installation is selected**,
Setup proceeds with Step 3 before automatically installing Windows. Quick Installation overwrites the existing Windows version, so that drivers or applications do not need to be reinstalled.

4. After the system has restarted, the message '**Press any key to boot from CD**' appears. Do not press any key at this time. After a while the partition configuration screen appears.
   To not change the partition, press <**Enter**>.

**Note** **What is partition configuration?**
Partition configuration is a function that devides the hard disk drive into one or several partitions. Note that changing the partition deletes all of the data on the hard disk drive.

5. Select the folder to install the Windows operating system.
   To delete the previous version of Windows and install in the current folder, press <**L**> on the keyboard.

**Note** If you press ESC to select another folder for the installation, new Windows folders are created causing a risk of dual booting.

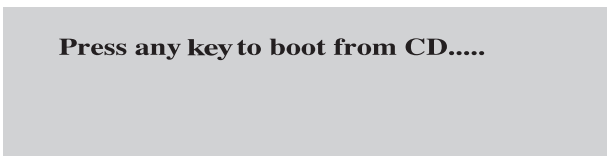
6. After the installation process copies the necessary folders for the Windows installation, restart the system, and the message "Press any key to boot from CD" is displayed. You do not need to enter anything. In a moment, the Windows XPinstallation screen will appear to proceed with the installation.
7. When the Regional and Language Options window appears, click Next.
8. When a window that requires your name and organization pops up, enter your name and the organization and click **Next**. In the Windows XP Professional edition, an additional window that requires thecomputer name and the administrator password appears. Enter **the computer name and the administrator password** and click **Next**.
9. When **the Date and Time Settings** window appears, click **Next**.
10. When the system restarts to display Press any key to boot from CD, do not press any key.

    When you see the Windows desktop, this means that the installation process is completed. Remove the system recovery CD and install **the device drivers and applications** from **the system software CD**.

## If You Cannot Run Windows

If you cannot run Windows, you have to boot the system with the system recovery CD, and reinstall Windows. If you boot the system from the system recovery CD, you can install Windows only with the user installation option. You cannot install with the standard installation option.

1. Insert the system recovery CD into the CD-ROM drive and start the computer.
2. If the following message appears on the screen, press any key from the keyboard.




**Note** This message appears only when the CD drive has booting priority.
If the message does not appear, configure the **CD drive as the first booting device** referring to the **Changing Booting Priority** in the User Guide. (Refer to P.6-6)

3. Do not press any key at this time. After a while the partition configuration screen appears. To not change the partition, press **<Enter>**.
4. Select the desired file system ( format ).
   To maintain the current file system, press **<Enter>**.
5. Select the folder to install the Windows operating system. To delete the previous version of Windows and install in the current folder, press **<L>** on the keyboard.
6. After the installation process copies the necessary folders for the Windows installation, restart the system, and the message “Press any key to boot from CD” is displayed. You do not need to enter anything. In a moment, the Windows XP installation screen will appear to proceed with the installation.
7. Follow the instructions of the Windows XP installation wizard to continue with the installation.
8. When the installation is complete, the computer will restart.
   When the system has restarted, the Press any key to boot from CD message appears. Ignore the message.

The system boots and the Windows and Windows Registration screen appears. Register Windows, following the instructions to finish the Windows installation. Remove the System Recovery CD and install the **device drivers** and **application programs** using **Standard Installation** from the **System Software CD**.

# Q&A

This section provides information on possible problems, solutions and other references for system use.

## Windows Related

**Q1 The system does not shutdown properly.**

A When the system does not shutdown normally, press and hold the Power button until the system manually shuts off. If the Power-Saving Mode is configured into the Power button, press and hold for more than 4 seconds to shut the system off. When the system is turned on after such manual shutdown, Scandisk will run to check errors in the system.

**Q2 The system freezes during program operation**

A1 There is an error with the program currently being used. Press the <Ctrl>, <Alt>, and <Delete> keys simultaneously and click 'End Task in the [Windows Task Manager] window.

A2 There is an error with the Windows OS. Reboot the system by using the Power button.

**Q3 The system enters rest mode when operating on battery power if the battery charge is too low.**

A Connect the AC power immediately. Operating in rest mode for a long period of time may cause loss of data.

# Display Related

**Q1 The LCD screen is too dark or too bright.**

A Adjust the LCD screen brightness. Use the <Fn> + < > , <Fn> + < > keys.

**Q2 The screen saver disturbs screen viewing during Media Player or video file operation.**

A Unselect Tools > Option > Player > Allow screen saver during playback in the Media Player.

**Q3 In DOS mode, changing the full screen DOS mode by pressing <ALT>+<Enter> key displays a broken image for a short period.**

A The DOS mode which supports 2 Byte characters such as Korean and Japanese runs in graphic not in text mode. In this case, a broken image may be displayed while changing the video mode settings.

**Q4 In the following cases, the screen blinks or displays noise for a short time:**
(Click on the Graphics related tab, change the Resolution, change the Display Device, remove the AC Adapter, restart the system and change the PowerPlay level.)

A In the above cases, the display devices may flicker for a moment or show some interference.

**Q5 When I connect a projector, and change the setting to display screen image on both the LCD and the projector by pressing <Fn>+< > keys, screen is not displayed properly.**

A Press <Fn>+< > keys once again.

**Q6 The desktop momentarily appears as a broken image when zooming in or out of the Media Player screen when Media Player is running.**

A Since zooming in or out of the Media Player screen changes the screen resolution, the desktop may momentarily appear as a 'broken image' during this operation.

**Q7 A DVD or an MPEG file is only played on the LCD (ATI chipset model).**

A When both the LCD and the CRT are being used simultaneously, video plays on one of them by default.

1. Right-click over the Desktop and select Properties.
2. In the [Display Properties] window, click the Settings tab > Advanced > ATI Overlay tab.
3. Select the Theater Mode option, and then configure the Overlay Display Mode to 'Theater Mode' or 'All The Same' and then click on Apply. Then you can view the video on both the LCD and CRT screens.

**Q8 When I change the power source to the battery by removing the AC adapter or change the display device to CRT from LCD, I sometimes see a POWERPLAY warning message (ATI chipset models)**

A The PowerPlay function is a new technology that extends the battery usage time. PowerPlay works only when the system is operating on battery power and using an LCD. When the PowerPlay function is disabled due to a changed operating environment, the PowerPlay function warning message may be displayed.

**Q9 I cannot see the Taskbar on the Desktop when I use a projector (ATI chipset models)**

A This happens because the project does not support 1400x1050 pixels. However the 15.0" SXGA+ LCD supports 1400x1050 pixels. In this case, change the system screen resolution to 1024 x 768 pixels (recommended).

**Q10 The "Video mode not supported" or "Input signal exceede" message appears for some older model TVs or monitors.**

A This problem may occur when the TV or monitor does not support the current system resolution. Change the resolution of the external display device to 800x600 pixels or lower, or do not use Full screen DOS mode.

**Q11 When I used an external display device with the SXGA+ system and disconnected the device from the system, the original screen resolution is not restored.**

A In general, when using an external display device with low resolution, the LCD resolution is degraded while using the device and the original resolution is restored automatically after disconnecting the external display device. If the original resolution is not restored when disconnecting the external display device, complete the following procedures. Press <Fn>+< > keys to change the display device. Otherwise, click the Ati icon on the taskbar, and change the screen resolution to the correct setting.

**Q12 Pressing a function key in DOS mode does not display the OSD (status display icon) on the screen.**

A The system does not support OSD display when in DOS mode.

# Modem Related

**Q1 I cannot hear the modem sound.**

A1 Check that the telephone line is properly connected to the modem.

A2 Check that the modem driver is installed properly.

1. Click **Start > Control Panel > Performance and Maintenance > System**.
2. Select **Hardware** tab **> Device Manager > Modems** in the **System Properties** window, and check if there is a yellow exclamation mark on the installed modem icon. If there is, delete the modem device driver and reinstall the driver, because the yellow exclamation mark represents a not properly installed driver.
3. If there is no yellow exclamation mark, double-click the installed modem, and click **Diagnostics** tab **> Query Modem** in the **Modem Properties** window to diagnose the modem.

No message in either of Command and Response in the **Diagnostics** tab means that the modem is not operating properly.
Diagnose the modem again after restarting the system or reinstalling the driver.
(You have to exit all programs using modem in the advance of diagnostics of the modem).

**Q2 I cannot make a call using an extension line.**

A In general, the dial tone of a PABX or a digital phone switching system is not a continuous one, unlike that of a trunk line.
Therefore, the modem may not make a call because the modem mistakes the dial tone from a PABX or a digital phone switching system as a busy tone.
In this case, complete the following procedures.

- **Using an AT command**
  As an initialization command, use the command, ATX3.
  Otherwise, enter the ATX3 command manually before making a call.
  It can correct this problem by skipping the dial tone check step.

- **Configuring the Modem through the Control Panel**
  1. Click **Start > Control Panel > Network and Internet Connections**
  2. Under **See Also**, click **Phone and Modem Options**.
  3. In the **Modems** tab, select the installed modem, and click **Properties**.
  4. In the **Modem** tab of the **Modem Properties** window, clear the '**Wait for dial tone before dialing**' check box.
  5. When the configuration is completed, click **OK**.

### Q3 How do I use my modem when dialing from overseas?

A1 Check that the modem is correctly configured according to the current country. Because the values for communication may differ according to the country, you may not be able to connect via the modem due to an incorrect modem configuration.

1. Click **Start > Control Panel > Network and Internet Connections**.
2. Under **See Also**, click **Phone and Modem Options**.
3. In the **Dialing Rules** tab, click **Edit**.
4. In the **General** tab in the **Edit Location** window, select the current country from the **Country/region** radio box, specify the **Area code**, and click **OK**.

A2 Because the shape of the telephone plug may differ according to the country, you have to purchase and use the appropriate telephone plug for that particular country.

### Q4 How do I receive a fax while the system is in power saving mode (Rest mode) (For Windows XP and 2000)?

A To receive a fax when the system is in power saving mode, and the operating system is Windows XP or 2000, configure the system as follows:

1. The automatic fax reception function of the fax program needs to be activated. (For more information, refer to the corresponding fax program manual.)
2. Click **Start > Control Panel > Network and Internet Connections**.
3. Under **See Also**, click **Phone and Modem Options**.
4. In the **Modems** tab, select the installed modem, and click **Properties**.
5. In the Power Management tab of the Modem Properties window, select the "With this device, exit the computer from stand-by mode" item and then click OK.

The above setting enables the modem to turn on the system and receive a fax when in power saving mode.

# Wired LAN Related

**Q1 <Wake On LAN> Function.**

A <Wake On LAN> is a function that activates the system in rest mode when a signal (such as **ping** or **magic packet** commands) arrives from network(wired LAN).

▶ **To use <Wake On LAN> function**

1. Select **My Network Environment > View Network Connections** from the Desktop.
2. Click the right button on the touchpad over **Local Area Connection**, and select **Properties**.
3. Click **Configure...**, and select **Power Management** tab. Select '**Allow this device to bring the computer out of standby**', then click **OK**. Restart the system.

- If the system in rest mode is activated when there is no received signal, use the system after disabling <Wake On LAN> function.
- Connecting wired LAN while using wireless LAN may not execute <Wake On LAN> function. Configure wireless LAN to '**Disable**' to use <Wake On LAN> function.

1. Click on My Network Place> View network connections on the Desktop.
2. Right-click over Wireless Network Connection and select Disable.

**Q2 When I connected 100Mbps wired LAN and the computer exits standby/hibernate mode, a message informing 10Mbps wired LAN connection appears.**

A When the computer exits standby/hibernate mode, restoring the network takes about 3 seconds. When the network is restored, it operates in 100Mbps.

## Wireless LAN Related

Refer to (P.4-11) “Configuring the Network Environment Settings for Wireless LAN Network (WLAN)” for the basic uses of a wireless LAN.

**Q1 The Wireless LAN device is operating properly, but I cannot connect to the Internet or to another computer.**

This is due to an inappropriate configuration. Check the following check lists:

A1 If you are using a computer-to-computer (Ad Hoc) network connection, check that the name of the configured network (SSID) is correct. The network name (SSID) is case sensitive.

A2 If you are using a network key (encryption key), you have to use the same network keys for an AP (Access Point) or a computer-to-computer network (Ad Hoc). The network key of the AP is configured in the AP management program. Ask your network administrator or AP manager for more detailed information.

A3 Check that the device driver is properly installed. If the driver is not properly installed, you will find a yellow exclamation mark on the network icon by clicking **Start > Control Panel > Performance and Maintenance > System > Hardware tab > Device Manager > Network adapters > Wireless LAN adapter**. If there is a yellow exclamation mark, please reinstall the device driver with the system software CD.

A4 Referring to A2 of Q3, check that the network bridge configuration is correct.

**Q2 The signal strength is excellent, but I cannot connect to the network.**

Even if the signal strength is excellent, the network connection may not operate properly if the TCP/IP properties are not properly configured, or the network key (encryption key) is incorrect.

A1 Check that the TCP/IP properties are configured properly. When you connect to an AP, click the **Wireless Network Connection** icon () on the taskbar and select the Support tab. If the IP is not allocated properly, the IP address will be displayed as follows. (e.g. 169.254.xxx.xxx)
If the network does not provide DHCP, you have to specify the correct IP address by asking your network administrator.
Even if the network provides DHCP, the server may not allocate an IP address to the client properly, and the client station cannot connect to the network.

A2 Referring to A2 of Q1, check that the network key is correct.

A3 Referring to Q4, check that AP is operating properly.

**Q3 I cannot share an Internet connection.**

A1 It may require some time to synchronize the computers to share an Internet connection after the Internet connection sharing configuration is completed. If you cannot share Internet connection even after a longer period, restart the computer.

A2 Check if the connection between the network adapters is configured to bridge.
If there is a configured bridge connection between the network adapters through the network configuration wizard, remove the network bridge, and reconfigure the Internet connection sharing.
A bridge connection is created when you ran Network Setup Wizard from the [Network Connections] window, and selected both the internal connection adapter and another adapter in the wizard.

**Q4 I cannot connect to the AP.**

**Check the Computer Settings**

A1 Verify whether the wireless LAN function of the computer is on by doing the following. If the wireless LAN function is off, turn it on.
- For Windows XP, verify that the wireless network connection has been set to "Enable" in Start > Control Panel > Network Connections.
- If there is a Wireless LAN On/Off button, check if the wireless LAN button is pressed.

A2 Verify whether the same network key (encryption key) has been entered in both the AP and the computer.
The network key is an encryption key for encrypting data transmitted between the AP and the computer. It is recommended setting the network key manually.

**Check the AP Settings**

For the AP settings, refer to the User's Guide provided by the AP manufacturer.

A3 Verify whether the environment is suitable for using a wireless LAN.
The use of a wireless LAN may be restricted according to the environment and distance. Obstacles such as walls or doors affect the use of a wireless LAN. .
- Install the AP in a high and open space 50cm from the wall and far removed from any other radio signal sources.

A4 Verify whether the AP is operating properly.

- When the AP is not operating normally, turn off the AP and after a short while turn it on again.
- Verify whether the AP's firmware is the most recent version. (Contact the AP manufacturer or the place where you purchased the AP for details of the AP firmware.)

A5 Verify whether the AP has been properly connected to the network.
Verify whether the network is operating normally by connecting the wired network cable, which has been connected to the AP, to your computer.

A6 Check the network key settings (encryption key).
When automatic code conversion (a passphrase function) has been selected and data communication is not functioning even with a normal wireless connection, it is recommended entering the network key (encryption key) manually.

A7 Check the AP settings as follows. (The following is recommended for a standard environment and thus may differ according to the specific wireless network environment.)

- When several APs are present simultaneously, check the channel setting for each AP. When different APs are using nearby channels, interference may occur between electronic waves. Set the APs' channels further apart from each other. (Ex: Ch1, Ch5, Ch9, Ch13)
- When an AP's SSID (Service Set ID) option is set to "Hide", you cannot search for that AP on the computer. We recommend canceling the "Hide" option for an AP. The SSID is a name for distinguishing one wireless LAN from another wireless LAN.
- It is recommended using Long Preamble. Preamble is a signal for data transmission synchronization. Short Preamble may be supported by some types of APs but may cause compatibility problems.
- It is recommended using a static IP.
- Since static channel selection is more reliable than auto channel selection, it is recommended setting a static channel.

**Q5 In the Windows XP 'Available wireless networks' window, the Wireless Network Connection is displayed as 'Not Available'.**

A1 When there is a Wireless LAN button, ensure that the Wireless LAN button is turned on.

A2 Check if there is additional program for a wireless LAN connection installed.
Windows XP supports wireless LAN connections through the Wireless Zero Configuration (WZC) service. Therefore, an additional program for wireless LAN connection is not required, unless the network requires a specific program. However, installation of some wireless LAN related programs may sometimes disable the [View Available Wireless Networks] window supported by WZC service. Exit the wireless LAN related program then check whether the window is enabled.

A3 Initialize the device driver.
Click **Start > Control Panel > Performance and Maintenance > System > Hardware tab > Device Manager > Network adapters**, and select the wireless LAN adapter. Right-click the network adaptor and select 'Disable' from the popup menu. Then right-click over the network adaptor and select 'Enable' after a short wait to check that the device is operating properly.

A4 Right-click the My computer icon, and select **Manage**. When the Computer Management window appears, double-click **Services and Applications** on the left, and then click **Services** from the sub menu tree. Select the Standard tab in the right pane, double-click **Wireless Zero Configuration** and check that Startup Type is configured to **Automatic**, and the Service status is **Started**.

A5 In the case of Windows XP, click Advanced in the [Wireless Network Connection] dialog box (see p.4-12 'Connecting to an AP') and make sure that 'Use Windows to configure my wireless network settings' is selected.
This may happen when a third-party wireless network setup program (e.g. PROSet) other than Windows XP default program is installed. For setting up a wireless network using the Windows XP program, this option should be selected.

**Q6 When connecting to a computer-to-computer (Ad Hoc) network, I cannot connect to another computer connected to the same computer-to-computer network.**

A1 Make sure that the security settings and network name of the computer-to-computer (Ad Hoc) network is correct.

A2 Check the TCP/IP properties of the computers to be connected through the computer-to-computer (Ad Hoc) network. All of the computers to be connected through a computer-to-computer (Ad Hoc) network should be configured so that their IP addresses are within the same subnet range.

- If the TCP/IP Settings are configured to DHCP, the address is automatically configured to an address within the subnet IP range. This will take about 2~3 minutes.
- If the IP address is configured to static IP in TCP/IP properties, select **Use the following IP address** in the TCP/IP properties of the wireless adapter, configure IP address:10.0.0.1~10.0.0.254, and Subnet mask: 255.255.255.0, and then try again.
- A fixed IP is recommended for a small-size network.

**Q7 When using a computer-to-computer (Ad Hoc) network, sometimes I cannot search the access point.**

A It may happen occasionally when you are using a computer-to-computer (Ad Hoc) network connection. Even if you cannot find some access points, the computer-to-computer (Ad Hoc) network is operating properly. Click **Refresh** to view the latest search result.

**Q8 Running Help file while running Profile Wizard in the wireless LAN program (PROSet) makes the PROSet window white.**

A It will be displayed properly when you finish the profile wizard. It dose not affect the program operation.

**Q9 The network does not operate properly when both the wireless and the wired network connections are simultaneously configured with the same IP address.**

A You cannot use the wireless and the wired network connections using the same IP address simultaneously. To use either the wireless or the wired network in turn with the same IP address, you have to Disable whichever network device will not be using in the network connection of the Control Panel.

**Q10 The wireless LAN does not work properly when there is a device operating on an adjacent frequency in the vicinity of the product.**

A1 Channel interference may occur when a wireless video transceiver or a microwave oven is being used.If you experience channel interference from other equipment, it is recommended changing the channel to connect to the AP. For more information about AP settings, refer to the User Manual supplied by the AP manufacturer.

A2 IEEE802.11g equipment operates in hybrid mode when there is active IEEE802.11b equipment. This may result in data rate degradation.

**Q11 An established wireless LAN connection is disconnected after 2~3 minutes, and the connection is not recovered.**

A1 This may be caused by channel interference. Change the channel of the AP, and reconnect.

A2 This may be caused by selecting the 'Use IEEE 802.1x network authentication' option when IEEE 802.1x authentication is not available.
Check the properties of the AP in the wireless network settings. If the 'Use IEEE 802.1x authentication in this network' option is selected, deselect the option on the Authentication tab.
For more detailed information about authentication server, ask your network administrator.

A3 If the AP is configured to 'Use network authentication (Shared Key)'
If the AP is configured to authentication shared mode, all computers to be connected should be configured as follows:

- If you are using Windows XP, select network authentication(shared mode) in the wireless network settings.

  **Click Start > Control Panel > Network and Internet Connections > Network Connections**. Right-click the Wireless Network Connection icon, and click **View Available Wireless Networks > Advanced**. In the Wireless Networks tab, select an AP in the Available Networks field and click Configure and select Network Authentication (Shared Mode).

- If you are using Windows 2000, check that the network authentication mode is configured to Share in the security settings of the wireless LAN program (PROSet).

For more network authentication procedures, ask your AP (Access Point) administrator.

**Q12 After PROSet is installed, The "AEGIS Protocol (IEEE 802.1x) v2.2.1.0" appears in the [Local Area Connection Properties] window.**

A The AEGIS Protocol is a security authentication protocol that is automatically installed when PROSet is installed and does not affect the operation of other programs.

**Q13 Although I have turned the wireless LAN off using the Off Button on the PROSet, the wireless LAN operating light is still on.**

A This is normal. The Off Button for the Wireless LAN on the PROSet only turns off the S/W and not the H/W for the Wireless LAN.

**Q14 After installing the PROSet, I cannot manage the wireless network under Windows.**

A Click on "Use Microsoft Client" in the Tools menu of the PROSet program to manage a wireless network in Windows. To manage a wireless network in the PROSet program, click on "Use Inter PROSet/Wireless" in the Tools menu of the PROSet program.

# Game/Program Related

**Q1 3D game is not executed, or some functions are not working.**

A Change the graphic setting of the game to '2D' or 'Software Renderer', then execute the program again.

**Q2 I launched a game right after installing it, and the game is not executed.**

A This problem may occur when the game is not compatible with Windows XP. Launch the game again, and it will be executed properly.

**Q3 A game runs only in small screen format.**

**(ATI chipset models)**

A This may happen when the display settings are configured to reduced mode ('Use Centered Output'). To view the game in full screen mode, complete the following procedures.

1. Right-click on the desktop using the touchpad, and then select Properties.
2. In the [Display Properties] window, click the Settings tab > Advanced > ATI Display tab.
3. Select the Panel item, and select °ÆExtend the image to the screen size°Ø in the Display Properties.

**(Intel chipset models)**

A1 Before launching a game, right-click over the Desktop, and select Graphics Option >Fit to Monitor > Available.

A2 Before launching a game, configure to the Full Screen mode as follows.

1. Right-click in the video screen,
2. Click Graphics Options > Graphics Properties > Devices tab.
3. Click the corresponding device and then select 'Full Screen'.
4. Click OK.

**Q4 While playing a 3D game, I tried to change display devices using <Fn> + < > keys, then the system does not operate.**

A When you use <Fn> + < > keys while playing a 3D game, a system error may occur.
Do not use <Fn> + < > keys while playing a 3D game.

**Q5 <Fn>+< > Key combination does not work.**

A While displaying video of VCD or MPEG, or the display setting is Dual View, you cannot toggle display devices. Also the installation of NetWare Client 32 program disables the function of <Fn>+< >.

**Q6 While playing a game, pressing the <Fn>+< >keys does not work or the screen is not properly displayed.**

A Some games and 3D application programs may change the display device control. Therefore, pressing the <Fn>+< > keys may terminate the running program or may display an abnormal screen.
Press the <Fn>+< > keys before launching a program and do not press them while running the program.

**Q7 Running speed of a game is too slow or fast.**

A Change the setting of Power Schemes to '**Always On**'.
(Click **Start > Control Panel > Performance and Maintenance > Power Options > Power Schemes** tab, then configure the **Power schemes** field to '**Always On**'.)

**Q8 Pressing <Fn>+< > keys while running a game may cause abnormal operation of the system.**

A Do not press <Fn>+< > keys while a game is running, because it may cause a system error.

**Q9 Some part of a game image is not displayed or is displayed in black.**

A This may happen when running a game designed for DirectX 8.1, such as NHL 2003, MVP Baseball 2003, etc.

**Q10 When playing a game, the image display temporarily freezes a number of times.**

**(ATI chipset models)**

A This may happen when the PowerPlay setting is configured to 'Optimal Battery usage time' or 'Balance'.
1. Right-click over the Desktop and then select Properties.
2. In the [Display Properties] window, select the Settings tab > Advanced > ATI POWERPLAY tab.
3. Click the PowerPlay Settings button, and set the Plug-In, High Battery and Low Battery sliders to 'Optimal Performance' and then click Apply.

**(Intel chipset models)**

A This may happen when using the DFGT function.
1. Right-click over the Desktop and select Graphics Option > Graphics Properties > Device tab.
2. Click Notebook and click 'Power Schemes Settings'.
3. Unselect 'Intel¢Á Dual-Frequency Graphics Technology'.
4. Click OK.

### Q11 The screen is severely interrupted in some games. (ATI chipset models)

A In 3D games, the texture data needed in 3D screen presentation are stored in the system memory. When the system memory is not enough, the data is stored in the hard disk and transferred to system memory when the data is needed. In some games, the screen may be interrupted during this process.
Lower the game resolution or texture image quality. (Linage 2, Terminator 3, Delta Force : Black Hawk Down, Medal of Honor, Battlefield 1942, etc.)

### Q12 When I run 'The Sims Fun Party' game in Dual Display Clone mode, a mouse cursor afterimage appears (Intel chipset models)

A Change the display device to LCD only, by pressing the <Fn>+< > keys and launch the game again.

### Q13 When I play multiple avi and mpg files with Mplayer2, a different screen plays (Intel chipset models)

A This may happen when you play more than 3 video files simultaneously. Please play only up to 2 video files at a time.

# Security Center

**Q1 To change the popup window display settings when connected to the Internet.**

In the Windows XP SP2 environment, you can decide whether to display a popup window when connected to the Internet, for user convenience and security.

A1 To display most of the popup windows when connected to the Internet:

1. Click on Internet Options in Start > Control Panel > Security Center > Manage security settings for.
2. In the Privacy tab of Internet Properties, clear Block pop-ups.

A2 To display popup windows only from the current site when connected to the Internet:

Place the cursor on the notification area at the bottom of the Internet address bar and right-click to display a menu, from which you can select Temporarily Allow Pop-ups or Always Allow Pop-ups from This Site.

A3 To display popup windows from a particular site:

1. Click on Internet Options in Start > Control Panel > Security Center > Manage security settings for.
2. In the Privacy tab of Internet Properties, click on Settings from Block pop-ups.
3. Enter a URL to want to allow pop-ups into Address of Web site to allow and click on Add.
4. You will find that the entered address is added to the allowed sites list. The next time you connect to the Web site, you will see pop-ups appearing. When you need to re-block a permitted site, select the Web site address that you want to block from the Allowed Sites and click on Remove.

**Q2 When you connect to a Web site, you see the message, "To help protect your security, Internet Explorer stopped this site from installing an ActiveX control on your computer"or "This site might require the following ActiveX control" below the address bar.**

A Windows XP SP2 blocks unsigned ActiveX controls from being installed when connected to certain Web sites for security reasons. On some Web sites that have no ActiveX controls installed, applications are not started or do not display properly. In this case, to install ActiveX controls, right-click the notification area to display a menu from which you can select Install ActiveX control.

**Q3 When you see a Windows Security Alert icon appear on the right part of the task bar.**

With the Security Center feature added, Windows XP SP2 checks the Firewall, the automatic updates configuration and installation of virus-checking programs to display a Windows Security Alert icon on the right part of the task bar when it judges that the computer is vulnerable to attacks from the Internet. In this case, check the following to install the necessary components.

A1 Set up the Windows Firewall. When you set up the Windows Firewall, you will be protected from unauthorized access through the Internet or the network.

1. Click on Windows Firewall in Start > Control Panel > Security Center > Manage security settings for.
2. From the General tab of Windows Firewall, select ON (recommended).
3. If you want to allow a certain program or service to gain access to your computer using the Firewall, select and check the program or service that you want to allow access from, in the Exceptions tab of the Windows Firewall. If you want to add a program to Programs and Services, click on Add Program and select it.

A2 Set up Windows Automatic Updates.
This automatically downloads and installs critical updates via the Internet to keep your computer up to date.

1. Click on Automatic Updates in Start > Control Panel > Security Center > Manage security settings for.
2. From general tab of Automatic Updates window, select Automatic (recommended).

A3 Keep your computer current with the latest virus updates. (ex: Norton Antivirus)
Even when you have installed Norton AntiVirus on your computer, Windows cannot recognize the program until you configure the settings, displaying a Security Alert icon. When you first use or install Norton AntiVirus for the first time, follow the Registration Wizard steps to configure the registration settings. To protect your computer from virus attacks with the latest updates, click on Options to display the Norton AntiVirus Options window. From the left menu of the window, check Run Automatic Protection to select Automatic Protection and check Run LiveUpdate to select LiveUpdate.

A4 Two virus scanning programs on one computer may cause system conflicts. Remove one of the programs from the system.

A5 If Windows does not recognize the existence of an anti-virus program even when it has been installed, your computer could be vulnerable to attacks from the Internet. You should install an anti-virus program that your computer is able to identify.
Check the following programs which Windows can detect and select one from the list.
A list of anti-virus programs that Windows can detect:

- Symantec Norton Anti-Virus
- NetworkAssociates (McAfee)
- TrendMicro
- ComputerAssociates
- Panda
- Kaspersky
- Ahnlabs (AhnLab)

**Note** The list is subject to change. Visit the Web site (www.microsoft.com) regularly to check the latest list.

# HDTV Related

**Q1 On a component TV, the Full Screen DOS Mode screen does not display.**

A A component TV does not support the Full Screen DOS Mode screen due to an output power problem of the TV. Please use DOS mode in a window when using a component TV.

**Q2 The colors are too blurred.**

A Depending on the model of the TV or the color settings, a specific color may dominate. Adjust the color settings of the TV.

**Q3 When I watch a DVD and the resolution is higher than 540, the screen is not displayed or an error message appears.**

A The DVD international standard does not support resolutions higher than 480P. Configure the resolution of the component output mode to lower than 480P.

**Q4 How can I configure a component TV device?**

**(ATI chipset models)**

A
1. Right-click over the Desktop and then select Properties.
2. In the [Display Properties] window, select the Settings tab > Advanced > ATI Display tab.
3. Select the YPbPr item and click the Apply button.
4. Click the YPbPr button and select the appropriate TV type and then click the Apply button.

**(Intel chipset models)**

A Open the Graphics Properties window according to the following procedures.
1. Right-click over the Desktop and then select Graphics Option >Graphics Properties.
2. Select TV from the Device tab.
3. Select a resolution or type and click the Apply button.

**Q5 The screen does not display on the component TV.**

**(ATI chipset models)**

A This happens when the TV does not support the component TV mode configured in the video driver.

1. Click Display Properties > Settings > Advanced > Display tab > YPbPr button.
2. Select the relevant modes (480i, 480p, 540p, 720p,1080i,16:9) and click the Apply button. (At this time, the mode changes to the highest of the selected modes depending on the supported modes of the TV.)
3. Double-click the On/Off button of the YPbPr to change to the configured mode.
4. Click the Apply button.

**(Intel chipset models)**

A This happens when the TV does not support the component TV mode configured in the video driver.

1. Launch the Intel Graphics Properties.
2. Select TV from the Device tab, select a mode (720p,1080i) and click the Apply button.

**Q6 When I am watching the screen on a TV using YPbPr, the edges of the screen are trimmed.**

**(ATI chipset models)**

A Due to the hardware limit of the current ATI video chipset, a HDTV Underscanning function is not supported so that edges of the screen are trimmed.
The amount of edges trimmed is determined by the YPbPr mode and the TV type.

**(Intel chipset models)**

A Check that 'Full Screen' is selected in the Intel graphics properties. This happens because the current Intel chipset does not support the HDTV Underscanning function. The amount of edges trimmed is determined by the YPbPr mode and the TV type.

**Q7 I cannot change the display device to the component TV by pressing the <Fn>+< > keys. (ATI chipset models)**

A Pressing the <Fn>+< > keys does not change the display device to a component TV because of an output power problem.

# Appendix

Appendix

System specifications, software types and safety instructions are provided here.

# System Specifications

The system specifications will be described below. The system specifications may differ depending on the derived models.

## with an Intel Graphics Chipset

| Item | Specification | Comment |
|---|---|---|
| CPU | Intel Pentium M 1.6 GHz ~ / Dothan (FSB533) / Celeron M | Optional |
| Cache memory | 2 MB (Dothan) / Celeron 1MB | |
| Main memory | 256/512/1024 MB DDR2 SDRAM, 2 DDR2 socket | Max 2GB |
| Main Chipset | Intel 915GM (Alviso GM) / 82801FBM (ICH6-M) | |
| Hard Disk (HDD) | 2.5", UltraDMA100, S.M.A.R.T 9.5mmH | |
| CD Drive | DVD-ROM , CD-RW/DVD-ROM Combo, DVD-Super Multi | Optional |
| Graphics | Intel 915GM | |
| Sound | SigmaTel C-Major Audio (AC97 CODEC) | |
| Network Interface | Modem : SENS LT56ADW (V.92 Modem) | |
| | Wired LAN : Broadcom 440x 10/100 Intergated Controller | |
| | wireless LAN : 802.11 g or 802.11 a/g | Optional |
| | Bluetooth : Bluetooth 1.1 | Optional |
| Memory Card Slot | Memory Stick, Memory Stick Pro, SD(Secure Digital) Memory Card | |
| PCMCIA Slot | Type I and II Compatible | |
| TPM | Trusted Platform Module | Optional |
| Ports | IEEE 1394 (6 Pin), USB 2.0 x 4, Microphone and Headphone, Modem(RJ-11), LAN(RJ-45), Monitor, TV Output, DC-In, Serial, Parallel | |
| Options | Port Replicator, 2nd HDD pack | |
| Dimensions (mm) | 327.5 x 275.5 x 32.2 (15.0") | Width x Depth x Height |
| LCD Panel Size | 14".1 XGA, 15.0" XGA, 15.0" SXGA+ | Optional |
| Weight | 2.7 Kg | |
| Battery | Lithium-Ion smart battery | |
| Operation Environment | Temperature for custody : -5~40°C for operation: 10~32°C | |
| | Humidity for custody : 5~90% for operation: 20~80% | |
| Operation Voltage | 100 - 240VAC | |
| Frequency | 50 - 60Hz | |
| Output Power | 60W* | |
| Output Voltage | 19.0 VDC | |

The system specifications are subject to change without notice. For detailed system specifications, refer to the product catalog.

*) Using the AC adapter (60W) in other models may cause a system malfunction. Please use only an AC adapter specified in the system specification.

## with an ATI Graphics Chipset

| Item | Specification | Comment |
|---|---|---|
| CPU | Intel Pentium M 1.6 GHz ~ / Dothan (FSB533) / Celeron M | Optional |
| Cache memory | 2 MB (Dothan) / Celeron 1MB | |
| Main memory | 256/512/1024 MB DDR2 SDRAM, 2 DDR2 socket | Max 2GB |
| Main Chipset | Intel 915PM (Alviso PM) / 82801FBM (ICH6-M) | |
| Hard Disk (HDD) | 2.5", UltraDMA100, S.M.A.R.T 9.5mmH | |
| CD Drive | DVD-ROM , CD-RW/DVD-ROM Combo, DVD-Super Multi | Optional |
| Graphics | ATI Mobility Radeon X300/X600, Memory : 64/128MB | |
| Sound | SigmaTel C-Major Audio (AC97 CODEC) | |
| Network Interface | Modem : SENS LT56ADW (V.92 Modem) | |
| | Wired LAN : Broadcom NetLink Gigabit Ethernet | |
| | wireless LAN : 802.11 g or 802.11 a/g | Optional |
| | Bluetooth : Bluetooth 1.1 | Optional |
| Memory Card Slot | Memory Stick, Memory Stick Pro, SD(Secure Digital) Memory Card | |
| PCMCIA Slot | Type I and II Compatible | |
| TPM | Trusted Platform Module | Optional |
| Ports | IEEE 1394 (6 Pin), USB 2.0 x 4, Microphone and Headphone, Modem(RJ-11), LAN(RJ-45), Monitor, TV Output, DC-In, Serial, Parallel | |
| Options | Port Replicator, 2nd HDD pack | |
| Dimensions (mm) | 327.5 x 275.5 x 32.2 (15.0") | Width x Depth x Height |
| LCD Panel Size | 14".1 XGA, 15.0" XGA, 15.0" SXGA+ | Optional |
| Weight | 2.7 Kg | |
| Battery | Lithium-Ion smart battery | |
| Operation Environment | Temperature for custody : -5~40°C for operation: 10~32°C<br>Humidity for custody : 5~90% for operation: 20~80% | |
| Operation Voltage | 100 - 240VAC | |
| Frequency | 50 - 60Hz | |
| Output Power | 90W | |
| Output Voltage | 19.0 VDC | |

The system specifications are subject to change without notice. For detailed system specifications, refer to the product catalog.

# Wireless LAN Specifications (Optional)

## Intel(R) PRO/Wireless 2200BG Network Connection

| Item | | Specifications |
|---|---|---|
| Physical Specifications | Dimensions | 59.75 X 44.45 mm (Width X Height) |
| | operation temperature and humidity | Same as system operation specifications<br>Temperature: 0 ~ 70°C, Humidity: less than 85% |
| Power Specification | Power Saving Mode | 135mW |
| | Receiving Mode | 0.85W |
| | Transmission Mode | 1.45W |
| | Power | 3.3V |
| Network Specifications | Compatibility | IEEE 802.11g, IEEE 802.11b |
| | Operating System | Microsoft Windows XP, 2000<br>- NDIS5 Miniport Driver |
| | Media Access Protocol | CSMA/CA (Collision Avoidance) with Acknowledgement (ACK) |
| | Security | Wired Equivalent Privacy support (WEP) 64bit/128bit<br>WPA*, CCX* |

* This piece of equipment supports the Wi-Fi wireless LAN security standard, WPA (Wi-Fi Protected Access) and CCX (Cisco Compatible eXtensions). To connect to a wireless network consisting of the WPA and CCX certificates, Windows patch (KB826942) or PROSet may be required depending on the network settings. For information on the PROSet installation, refer to P.4-17 'Wireless Network Setup Using the Wireless LAN Setup Program'. For more information, ask your network administrator.

## RF Specifications

| | |
|---|---|
| R-F Frequency Band | 2.4GHz |
| Support Channels | Channels allowed per country. |
| Device Description | Transceiver |
| Power | 5 mW |
| Transmission Method | 11b mode: DSSS<br>11g mode: OFDM |
| Data Rate (Mbps)* | 11b mode: 11, 5.5, 2, and 1<br>11g mode** : 54, 48, 36, 24, 18, 12, 9, and 6 |
| Antenna Type | Internal Antenna 2 EA (main/aux) |

* The data rate may differ from the actual data rate.
** 11g mode is supported only when the device is connected with an IEEE802.11g device (e.g. IEEE802.11g compatible Access Point).

# Intel(R) PRO/Wireless LAN 2915 ABG Network Connection

| Item | | Specifications |
|---|---|---|
| Physical Specifications | Dimensions | 59.75 X 44.45 mm (Width X Height) |
| | operation temperature and humidity | Same as system operation specifications<br>Temperature: 0 ~ 70°C, Humidity: less than 85% |
| Power Specification | Power Saving Mode | 135mW |
| | Receiving Mode | 0.85W |
| | Transmission Mode | 1.45W |
| | Power | 3.3V |
| Network Specifications | Compatibility | IEEE 802.11a, IEEE 802.11b, IEEE 802.11g, |
| | Operating System | Microsoft Windows XP, 2000<br>- NDIS5 Miniport Driver |
| | Media Access Protocol | CSMA/CA (Collision Avoidance) with Acknowledgement (ACK) |
| | Security | Wired Equivalent Privacy support (WEP) 64bit/128bit<br>WPA*, CCX* |

* This piece of equipment supports the Wi-Fi wireless LAN security standard, WPA (Wi-Fi Protected Access) and CCX (Cisco Compatible eXtensions). To connect to a wireless network consisting of the WPA and CCX certificates or PROSet may be required depending on the network settings. For information on the PROSet installation, refer to P.4-17 'Wireless Network Setup Using the Wireless LAN Setup Program'. For more information, ask your network administrator.

## RF Specifications

| | |
|---|---|
| R-F Frequency Band | 2.4GHz, 5GHz |
| Support Channels | Channels allowed per country. |
| Device Description | Transceiver |
| Power | 5 mW |
| Transmission Method | 11a mode : OFDM<br>11b mode : DSSS<br>11g mode : OFDM |
| Data Rate (Mbps)* | 11a mode** : 54, 48, 36, 24, 18, 12, 9, and 6<br>11b mode : 11, 5.5, 2, and 1<br>11g mode*** : 54, 48, 36, 24, 18, 12, 9, and 6 |
| Antenna Type | Internal Antenna 2 EA (main/aux) |

* The data rate may differ from the actual data rate.
** 11a mode is supported only when the device is connected with an IEEE802.11a device (e.g. IEEE802.11a compatible Access Point).
*** 11g mode is supported only when the device is connected with an IEEE802.11g device (e.g. IEEE802.11g compatible Access Point).

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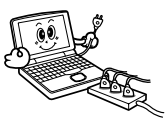
# Safety Instructions

## Instructions for Setup

- **Set up the system on a stable work surface.**
  If the system is dropped it may be damaged or it may inflict injuries on the user.

- **Do not use loose power outlets or damaged power cables.**
  There is a danger of electric shocks or fires.

- **Set up the system in a clean, dry and airy place.**
  If the system overheats, it may be damaged or it may cause fires.



- **Use standard power voltage.**
  High-voltage may result in product damage or cause fires.

- **Use grounded power outlets designed for computers.**
  A grounded power outlet prevents electric shock from electricity leakage.

- **Set up the system away from magnetic objects.**
  Contents of the hard disk drive may be deleted or the color of the monitor may be permanently distorted.

- **Dispose of moisture-reducing agents and plastic packaging properly.**
  Consumption of moisture-reducing agents and placing plastic packaging over the head is fatal, especially for children.

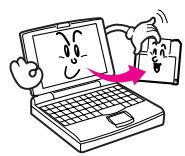
# Instructions for careful handling

- **Handle with care so as not to damage the data in the hard disk.**
  - Since the hard disk is fragile and sensitive to external conditions, it may be damaged from temperature changes or impact during operation. Take extra care to prevent such damages.
  - Loss of data due to external conditions or carelessness during use is the user's sole responsibility and the manufacturer shall not be held liable for any compensation.

In order to minimize damages from data loss, please backup data at all times.

**Cases when the hard disk and data may be damaged:**

- External impacts while separating from or installing into the computer may cause disk or data damage.
- Power failure during hard disk operation resulting in resetting the computer may cause disk or data damage.
- Execution of delete (DEL) or format (FORMAT) commands by mistake may cause loss of data.
- Virus infection may cause unrecoverable loss of data.
- An abrupt power cut during program operation may cause disk or data damage.
- Moving the computer, or impacts to the computer during hard disk operation may cause data loss or bad sectors on the hard disk.



- **Be sure to make backup copies of important data.**
  The Manufacturer is not liable for lost data.
- **Turn on peripheral devices before, turning on the computer**
  Otherwise damages may occur.
- **Turn off the computer before turning off other peripheral devices.**
  Otherwise damages may occur.
- **Do not touch the modem, telephone lines and exposed electrical terminals during a thunder storm**
  There is a danger of electric shocks or fires.
- **Before disassembling the system, turn the power off and disconnect the power cable.**
  There is a danger of electric shocks.

- **Use only authorized parts and do not disassemble, repair or modify the computer unless at an authorized dealer.**
  Use authorized service centers as the system may be damaged.

- **Do not touch the power strip with wet hands.**
  There is a danger of electric shock.

- **Place the computer away from heat devices (such as heaters).**
  It may damage the system or cause fires.

- **Clean with cleaners specifically for computers**
  Do not use benzene, paint thinner, or alcohol to clean the computer. It may damage the product.